L. Shirnell ORD

Issue 55

PS

1957 Series

THE PREVENTIVE MAINTENANCE MONTH

Potent - When Maintained Right

Uncle Sam's got two mighty important things that make his military forces potent: You and your equipment. Just how potent depends on the condition in which you keep yourself and your equipment.

For you, there's training, exercise, rest, good food, and all the things you do to keep in tip-top shape.

For your equipment, there's one big thing that's the real key to how good your equipment is—and how well it'll fight—Preventive Maintenance. It's the right kind of care, cleaning, lubing, adjusting and handling you give your stuff.

It's knowing and following the in's and out's of your equipment's TM, LO and supply manual. It's knowing your equipment's tools and how to use them right. It's following all the details of the right kind of operation of your equipment.

That's right . . . Preventive Maintenance is how you **keep** the World's Best Equipment the best. So, with your equipment (and yourself) in top shape, you'll be ready to do your job . . . no matter where or when.

Result? A real potent Army.

PS

THE PREVENTIVE MAINTENANCE MONTHLY

Issue No. 55 — 1957 Series

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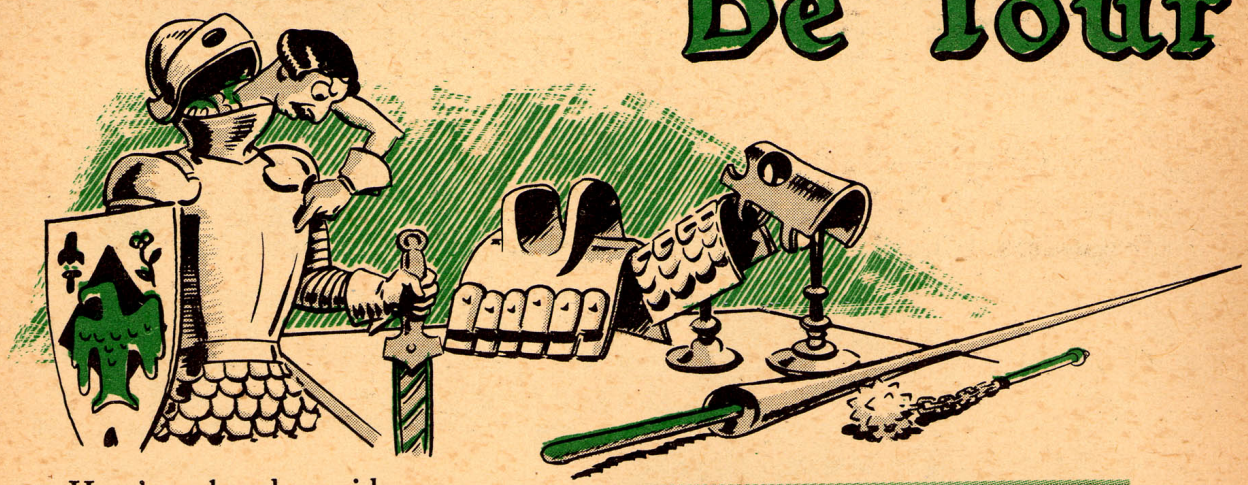
PS wants your ideas and contributions, and is glad to answer your questions. Just write to: **Sgt Half-Mast, PS, Raritan Arsenal, Metuchen, New Jersey.** Names and addresses are kept in confidence.

The printing of this publication has been approved by the Director of the Bureau of the Budget (27 Apr 56). DISTRIBUTION: ACTIVE ARMY: DCSPER; ACSI; DCSOPS; DCSLOG; ACSRC; CAMG; COA; CARROTC; COFF; CINFO; TIG; JAG; CLL; CMH; CNGB; COFSPWAR; Tec Svc, DA; Admin & Tec Svc Bd; Hq CONARC; OS Maj Comd; OS Base Comd; MDW; Armies; Corps; Div; Brig; Regt/Gp; Bn; CO; Ft & Cp; Gen & Br Svc Sch; USMA; Joint Sch; Specialist Sch; PMST Sr Div Units; PMST Mil Sch Div Units; PMST Jr Div Units; Gen Depots; Sup Sec, Gen Depots; Depots; Ord Tk Autmv Comd; AH; US Army Eng Cen; Sandia Base, AFSWP; Trans Terminal Comd; Army Terminal; OS Sup Agencies; POE (OS); PG; Arsenals; CMLCMATCOM; DB; Engr Maint Cen; Cruit Main Sta; Div Engr; Dist Engr. NG: State AG Special List. USAR: Mil Dist Special List. For explanation of abbreviations used, see SR 320-50-1.

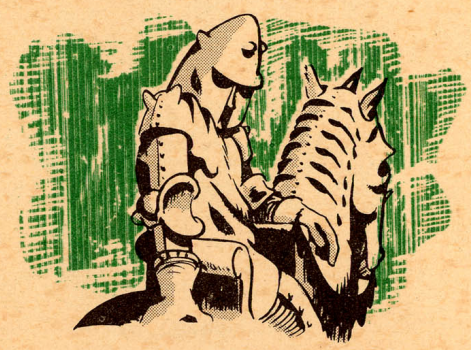
Be Your



Here's a handy guide you can use when you're checking over your truck. You'll see that these are the things an inspector will probably hit when he goes over your vehicle.

The pictures show the G749-series 2½-ton truck. You can also use them when checking over your G742 2½-tonners. They'll put you on the right track.

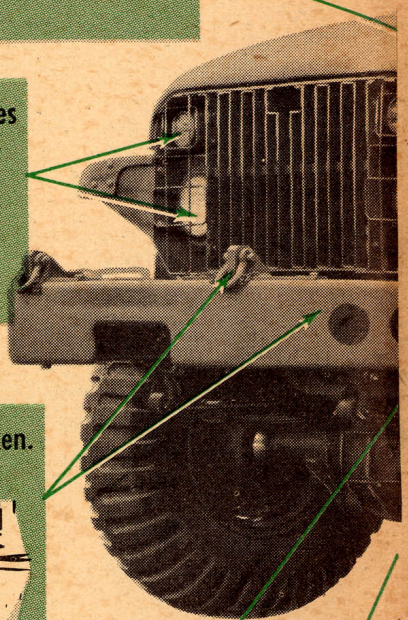
For the Driver



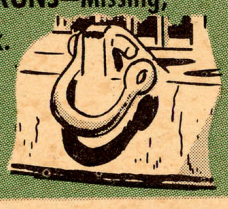
The tools you'll need for this are a tape measure, a tire pressure gage, a hydrometer, a pair of pliers, a screwdriver, and a differential plug wrench with an open-end adjustable wrench.

HOOD—Loose, squeaks when opened. Hinges and fastenings missing, broken, bent.

LIGHTS—Not working. Lenses dirty, cracked, clouded.



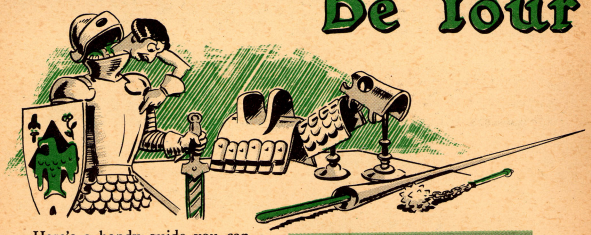
BUMPER—Bent, loose, broken.
LIFTING IRONS—Missing, bent, stuck.



NATIONAL and **UNIT MARKINGS**—Missing, incorrect, not legible.

FRAME—Bent, loose, broken.

Be Your Own Inspector



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HOOD—Loose, squeaks when opened. Hinges and fastenings missing, broken, bent.

LIGHTS—Not working. Lenses dirty, cracked, clouded.

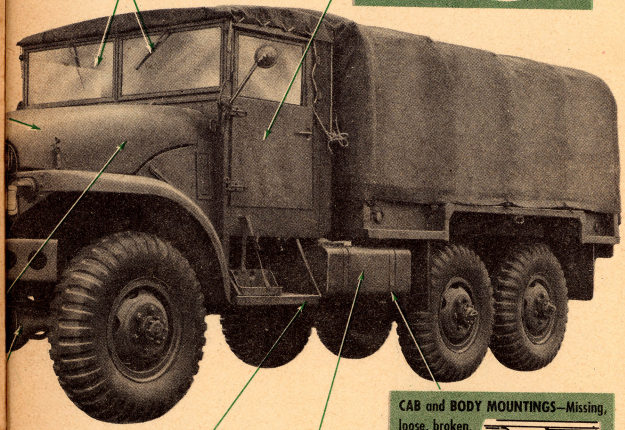
BUMPER—Bent, loose, broken.
LIFTING IRONS—Missing, bent, stuck.

NATIONAL and UNIT MARKINGS—Missing, incorrect, not legible.

FRAME—Bent, loose, broken.

WINDSHIELD WIPERS—Blades missing, arms broken, dead or hardened rubber.
WINDSHIELD—Cracked, clouded.

GENERAL VEHICLE APPEARANCE—Dirty, rust spots.



CAB and BODY MOUNTINGS—Missing, loose, broken.

AIR TANKS—Water in tanks. Petcock clogged, stuck, dirty.

GAS TANK—Leaking, loose. Shut-off valve bent or broken. Gas level too high (must be at least 2 inches below top of tank).

Own Inspector

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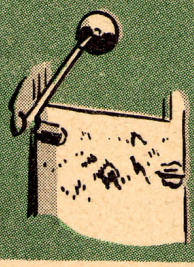
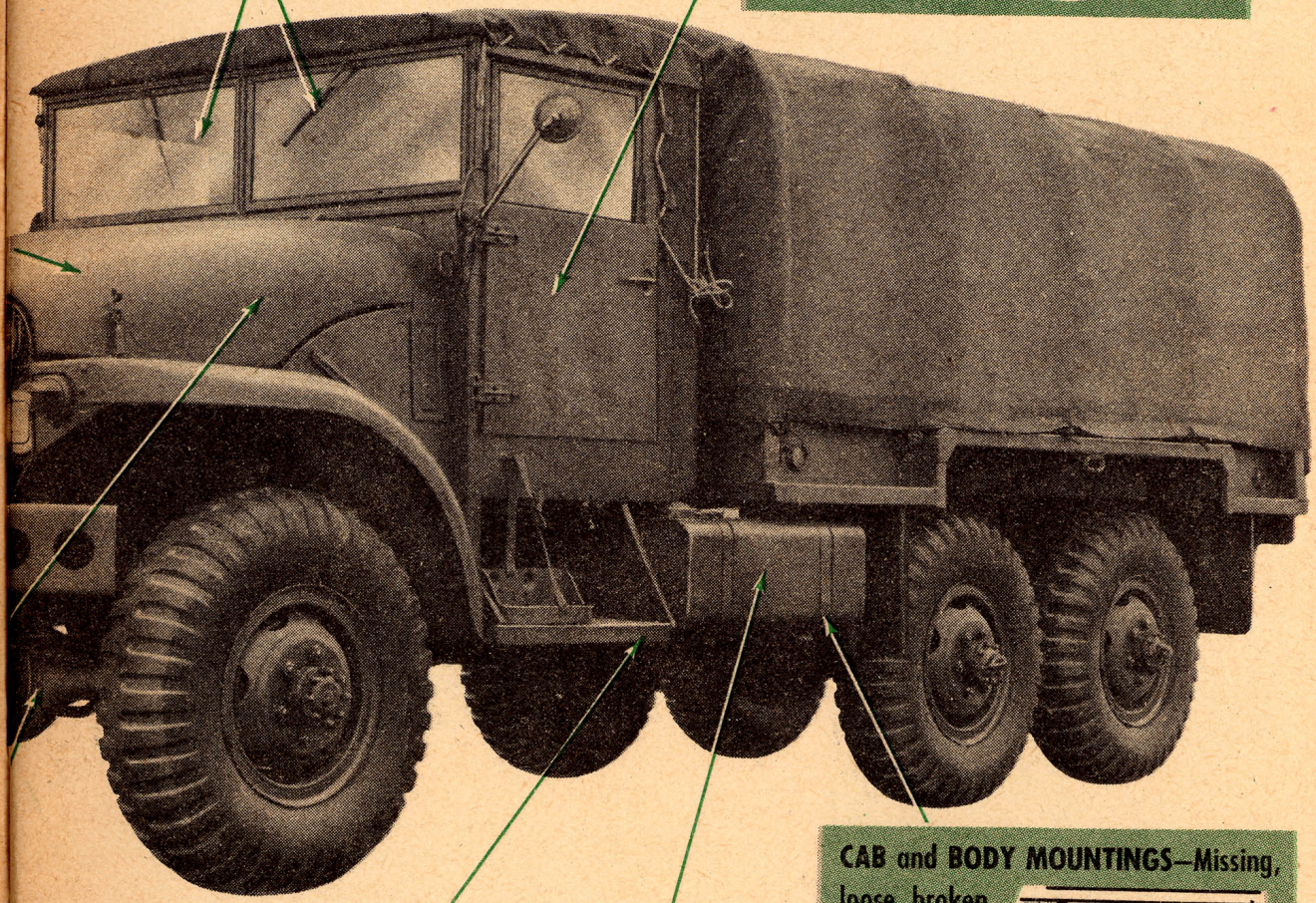
GENERAL VEHICLE APPEARANCE—Dirty, rust spots.





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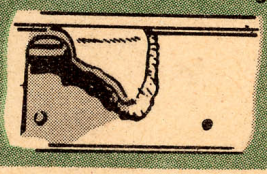

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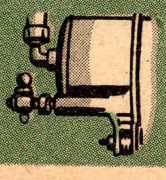
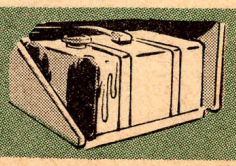
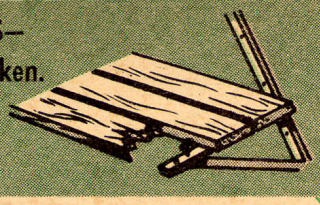


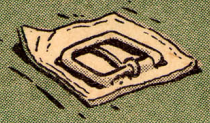
GAS TANK—Leaking, loose. Shut-off valve bent or broken. Gas level too high (must be at least 2 inches below top of tank).



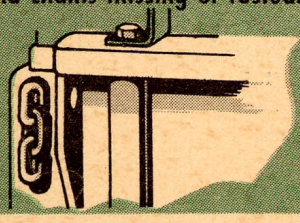
SEATS and RACKS—Missing, loose, broken.

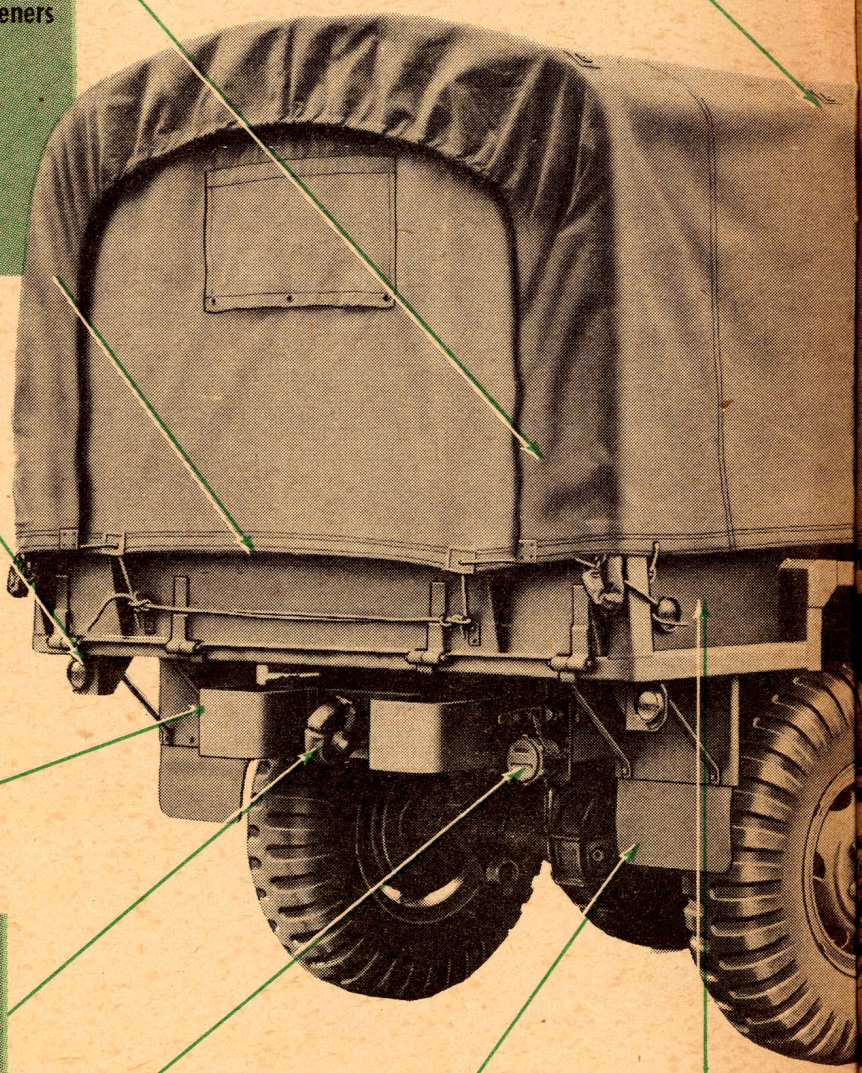


CANVAS, BOWS and STRAPS—Missing, torn, dirty. Broken top bows.



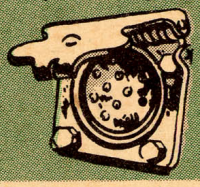
TAIL GATE—Bent, broken, loose, fasteners and chains missing or rusted.



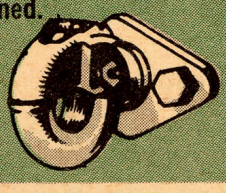


REFLECTORS—Missing, cracked, broken, dirty.

TRAILER RECEPTACLE—Dirty, lugs broken, caps missing or sprung.

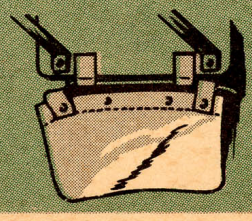


PINTLE—Missing, loose, not lubed, can't be opened.



REAR LIGHTS—Lenses dirty, broken, clouded.

SPLASH GUARDS—Missing, loose, worn. Fasteners, missing.



TIE DOWN HOOKS—Bent or broken.

SEATS and **RACKS**—Missing, loose, broken.

CANVAS, BOWS and **STRAPS**—Missing, torn, dirty. Broken top bows.

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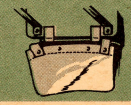

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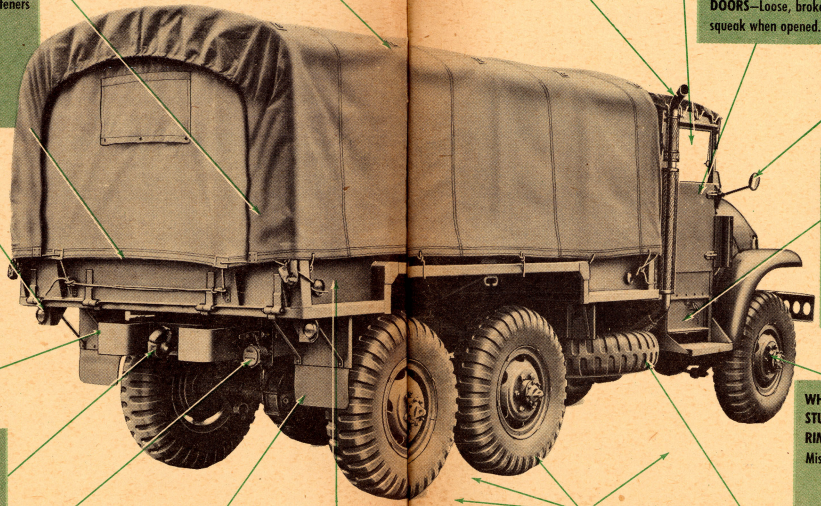
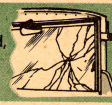


EXHAUST PIPE—Loose, broken, clogged, leaking. Screen loose or missing. Cracked bellows.

WINDOWS—Broken, loose, dirty, clouded, stuck (don't move up or down).



DOORS—Loose, broken, squeak when opened.

MIRRORS—Missing, broken, dirty or obstructed.

TOOL COMPARTMENT—Rusted, dirty. Trash or excess parts.
MISSING TOOLS—(Check against SNL).

WHEELS—Lube or brake fluid leaking.
STUDS—Bent, broken.
RIM and **AXLE FLANGE NUTS**—Missing, loose. Dowels rusted.

TIRES—Smooth worn tread, cut to fabric, uneven wear.
VALVES—Not properly positioned (should point away from vehicle). On dual jobs, valve stems not properly positioned (outside dual—points in toward vehicle; inside dual—points out away from vehicle and valves 180° opposite one another). Incorrect tire pressure (correct pressure—single-tired trucks, 70 PSI when cold; dual-tired trucks, 45 PSI when cold).

SPARE TIRE CARRIER—Loose, rusted. Tire valve blocked.

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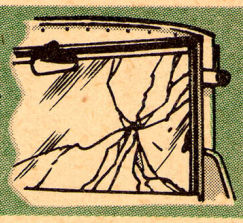

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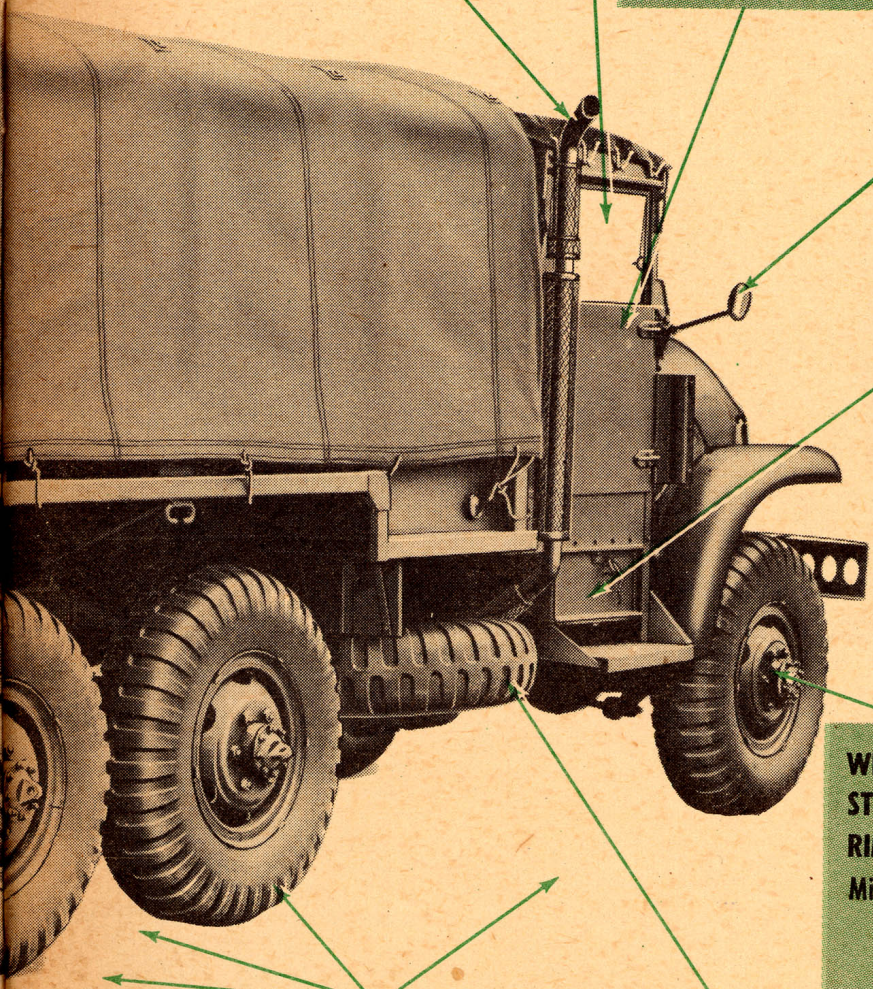

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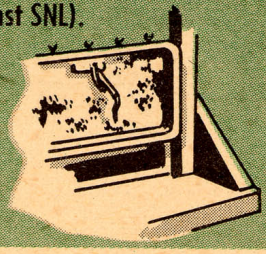

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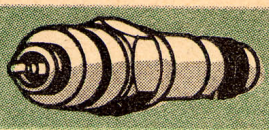
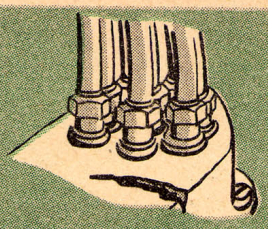
SPARK PLUGS—Dirty, loose, cracked.



BREATHER VENT HOSE—Cracked, worn, clogged.

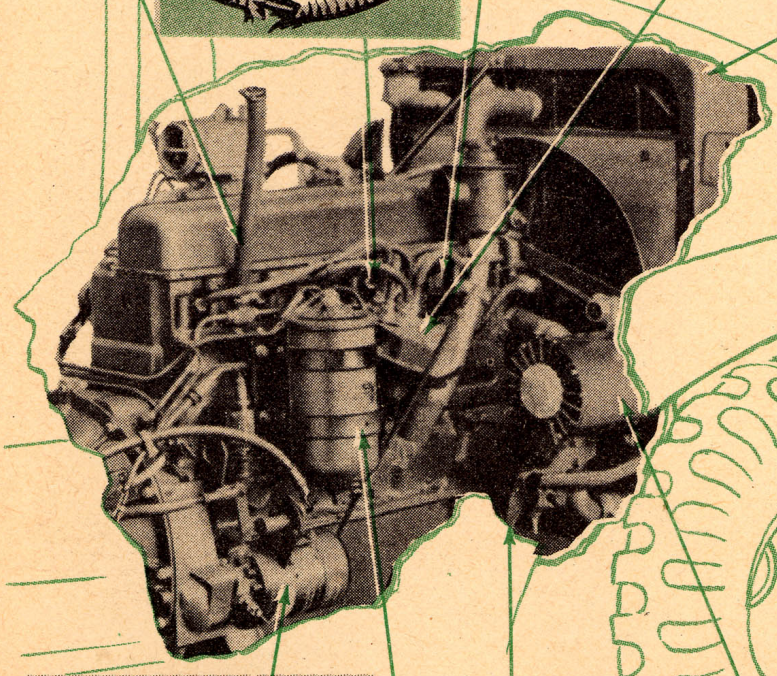
IGNITION WIRING—Cracked, worn, frayed.

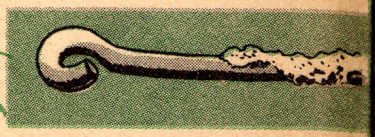


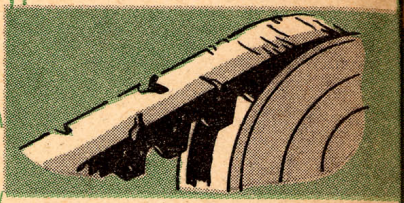
DISTRIBUTOR—Cracked or broken, dirty, loose.

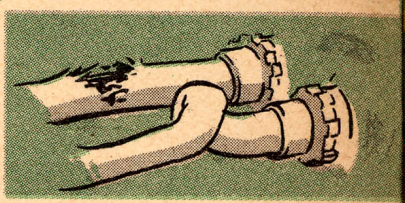
CRANKCASE OIL—Level too low or too high. (Don't check dip stick immediately after stopping.)

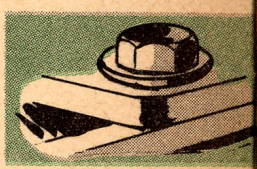
COOLING SYSTEM WATER—Dirty, rusty, not to level cock, radiator cap gasket missing.



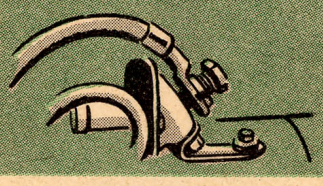




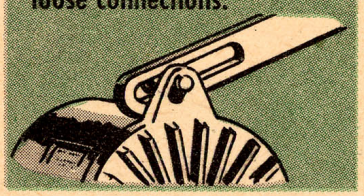




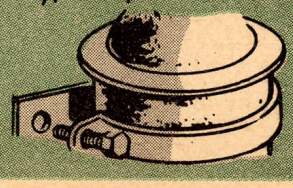
STARTER MOTOR—Loose, dirty, loose connections.



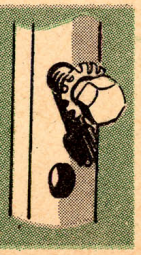
GENERATOR—Loose, dirty, loose connections.



OIL FILTER and BRACKET—Dirty, loose, leaks.



RADIATOR MOUNTING BOLTS—loose, missing.

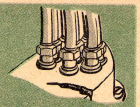


SPARK PLUGS—Dirty, loose, cracked.

BREATHER VENT HOSE—Cracked, worn, clogged.

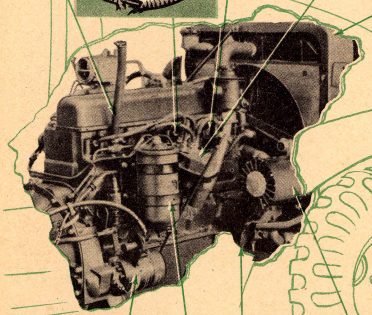
IGNITION WIRING—Cracked, worn, frayed.

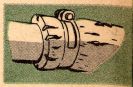
DISTRIBUTOR—Cracked or broken, dirty, loose.



CRANKCASE OIL—Level too low or too high. (Don't check dip stick immediately after stopping.)

COOLING SYSTEM WATER—Dirty, rusty, not to level cock, radiator cap gasket missing.

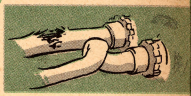




RADIATOR, COOLING SYSTEM HOSES, CLAMPS—Clogged, worn or torn, leaking, missing, bent or broken.

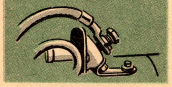
RADIATOR TIE ROD—Missing, loose, rusted.

FAN BELT—Incorrect adjustment, cracked or worn. (Proper adjustment; G749, ½" to ¾" deflection; G742, ½")



WIRES and CONNECTIONS—Loose, frayed, worn.

STARTER MOTOR—Loose, dirty, loose connections.



GENERATOR—Loose, dirty, loose connections.

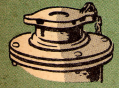
ENGINE MOUNTING—Bolts missing, loose.

OIL FILTER and BRACKET—Dirty, loose, leaks.

RADIATOR MOUNTING BOLTS—loose, missing.

AIR COMPRESSOR—Incorrect belt adjustment (proper adjustment—½" to ¾" deflection), belt worn or cracked, air breather dirty or clogged.

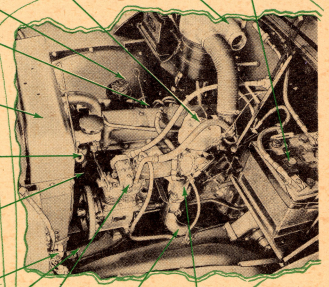
CRANKCASE BREATHER—Dirty, clogged, cap missing. Dirt more than ⅛" deep. Oil not at level mark.



AIR CLEANER and BREATHER—Loose, clogged, leaking, oil not at level mark. Dirt more than ⅜" deep.

BATTERIES and CONNECTIONS—Loose, battered case, level not to slots in vent wells, specific gravity below 1.225 at 80 degree temperature, vent caps missing or clogged, corroded terminals and posts.

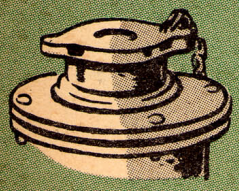
CARBURETOR and LINKAGE—Loose, bent.

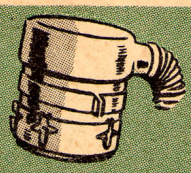


TAIL PIPE—Broken, cracked, rusted.

MANIFOLDS and HEAT CONTROL—Broken, loose, frozen, incorrect control setting (G749—60° and above temp, OFF positions; 30° and lower temp, ON position; between 30° and 60° temp, INTERMEDIATE position. G742—down or off except for extreme cold).

CRANKCASE BREATHER—Dirty, clogged, cap missing. Dirt more than 1/8" deep. Oil not at level mark.





AIR CLEANER and **BREATHER**—Loose, clogged, leaking, oil not at level mark. Dirt more than 3/8" deep.

BATTERIES and **CONNECTIONS**—Loose, battered case, level not to slots in vent wells, specific gravity below 1.225 at 80 degree temperature, vent caps missing or clogged, corroded terminals and posts.

CARBURETOR and **LINKAGE**—Loose, bent.

RADIATOR, COOLING SYSTEM HOSES, CLAMPS—Clogged, worn or torn, leaking, missing, bent or broken.

RADIATOR TIE ROD—Missing, loose, rusted.

FAN BELT—Incorrect adjustment, cracked or worn. (Proper adjustment; G749, 1/2" to 3/4" deflection; G742, 1/2")

WIRES and **CONNECTIONS**—Loose, frayed, worn.

ENGINE MOUNTING—Bolts missing, loose.

AIR COMPRESSOR—Incorrect belt adjustment (proper adjustment—1/2" to 3/4" deflection), belt worn or cracked, air breather dirty or clogged.

TAIL PIPE—Broken, cracked, rusted.

MANIFOLDS and **HEAT CONTROL**—Broken, loose, frozen, incorrect control setting (G749—60° and above temp, OFF positions; 30° and lower temp, ON position; between 30° and 60° temp, INTERMEDIATE position. G742—down or off except for extreme cold).

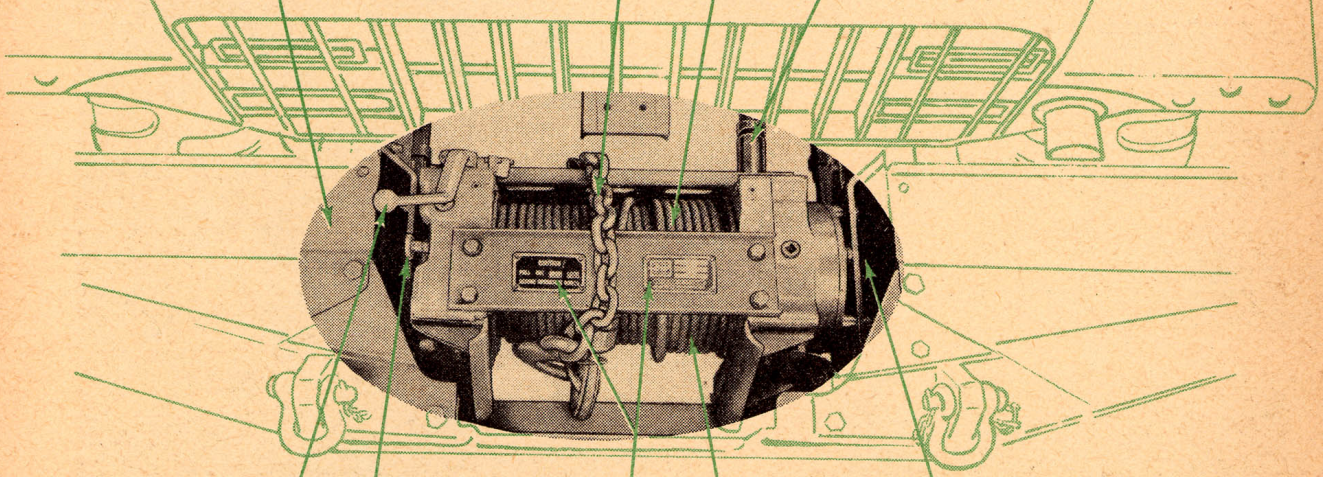
If You've Got A Winch

CHAIN—Rusted, dirty, hook hanging over bumper (must be tied down as shown here)

CABLE—Dirty, rusted, worn, shredding, not lubed, loose on drum, kinked.

WINCH END BEARING FRAME HOUSING—Incorrect lube level (must be filled to 6⅞ inches from top).

WINCH DRIVE SHAFT—Not lubed, dirty. (Must have aluminum shear pin.)



DRUM LOCK POPPET KNOB—Unlocked, inoperative, not lubed.

WINCH WORM HOUSING FILL—Lube level not at level plug.

DATA PLATES—Dirty, covered with paint, unreadable.

DRAG BRAKE—Not working right (test: 1. Push clutch control lever to Disengaged. 2. Pull out drum lock poppet knob, rotate ¼ turn to Disengaged. 3. Put PTO lever in Central Neutral. 4. Pull cable from drum. 5. Drum should stop revolving as soon as cable pull is stopped. 6. If drum overruns cable, drag brake needs adjusting).

CLUTCH CONTROL LEVER—Doesn't operate freely, bent, broken, rusty.

WINDSHIELD VERTICAL POSITION LOCK—Missing, rusted, inoperative.

WINDSHIELD TILT ADJUSTER—Missing, rusted, inoperative.

STEERING WHEEL—Bent. **HORN**—Inoperative, loose, broken.

WINDSHIELD INNER-FRAME LOCK—Missing, rusted, inoperative.

HYDRA-MATIC FLUID LEVEL—Leaking, improper level (check with handbrake set tight, transfer engaged, transmission gear selector in F-1 High Range and engine running at idle.)

SERVICE BRAKES—Spongy, too hard, improper adjustment (travels to a point less than 2 inches from floor), falls away under pressure.

ACCELERATOR PEDAL—Loose.

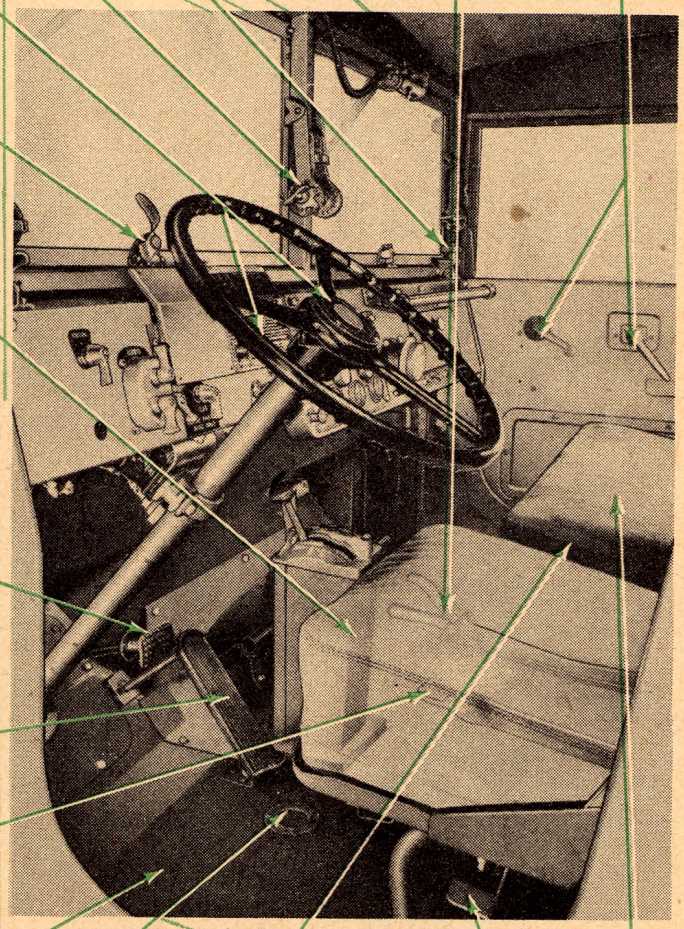
PTO LEVER—Stuck or bent. (Check with engine off.)

FLOORBOARDS—Missing screws, loose, rusted.

BRAKE MASTER CYLINDER—Leaking, not up to level (at least ¾ full).

HANDLES—Missing, loose, inoperative, broken.

HANDBRAKE—Inoperative (travels more than ¾ travel on full application).



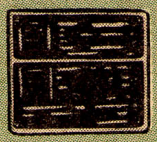
DRIVER'S SEAT ADJUSTER—Broken, stuck in one position.

PIONEER TOOLS—(Between seats.) Missing, rusted.

SEATS—Torn, worn, frayed.

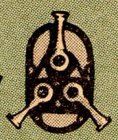
TEMPORARY PARKING BRAKE—Missing, inoperative, loose, broken.

DATA and CAUTION PLATES—Not readable.



WINDSHIELD WIPER CONTROL—Missing, inoperative.

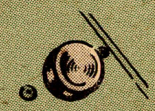
LIGHT SWITCH—Broken or cracked, inoperative.



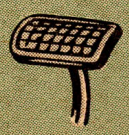
IGNITION SWITCH—Loose, inoperative.

COWL VENT CONTROL—Broken, loose.

AIR SUPPLY VALVE—Not operating.

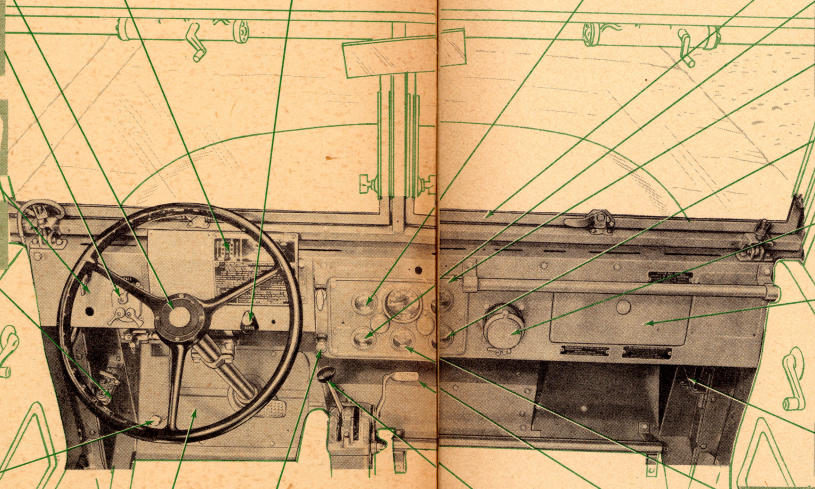


DIMMER SWITCH—Broken, doesn't work, loose, light on dash not working.



G742 CLUTCH—Improper free play (must be between 1¼" to 1½"), grabs, chatters, or slips.

CHOKE and THROTTLE CONTROLS—Missing, loose, inoperative.



TEMPORARY PARKING BRAKE—Missing, inoperative, loose, broken.

DATA and CAUTION PLATES—Not readable.

WINDSHIELD WIPER CONTROL—Missing, inoperative.

LIGHT SWITCH—Broken or cracked, inoperative.

IGNITION SWITCH—Loose, inoperative.

COWL VENT CONTROL—Broken, loose.

AIR SUPPLY VALVE—Not operating.

DIMMER SWITCH—Broken, doesn't work, loose, light on dash not working.

G742 CLUTCH—Improper free play (must be between 1¼" to 1½"), grabs, chatters, or slips.

CHOKE and THROTTLE CONTROLS—Missing, loose, inoperative.

BAT-GEN INDICATOR—Doesn't work right. (With engine running, indicator should not go well into yellow or red.)

WINDSHIELD CHANNELS—Rusted

OPERATING TEMP—G749, 160° to 220° F.; G742, 160° to 180° F.

INSTRUMENTS—Not working, lenses broken, cracked, clouded.

NORMAL IDLING OIL PRESSURE—G749, 5PSI; G742, 30 to 40 PSI.

AIR INTAKE—Caps missing or loose.

GLOVE COMPARTMENT—Loose, dirty. **FORMS AND PUBLICATIONS** (LO, TM, DD FORM 518, SF 91)—Missing, unreadable, incorrect publications, DD Form 518 not filled out.

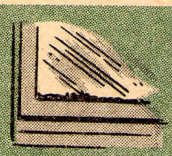
COWL VENT CONTROL—Broken, loose.

AIR PRESSURE—Doesn't rise after starting, buzzer keeps sounding. (Buzzer should go off at 60 PSI—G749; 65 PSI—G742).

TRANSMISSION GEAR SELECTOR—Loose, not lubricated.

STARTER—Inoperative.

BAT-GEN INDICATOR—Doesn't work right. (With engine running, indicator should not go well into yellow or red.)



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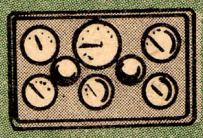

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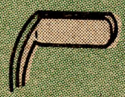
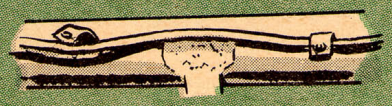
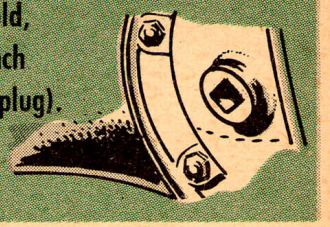


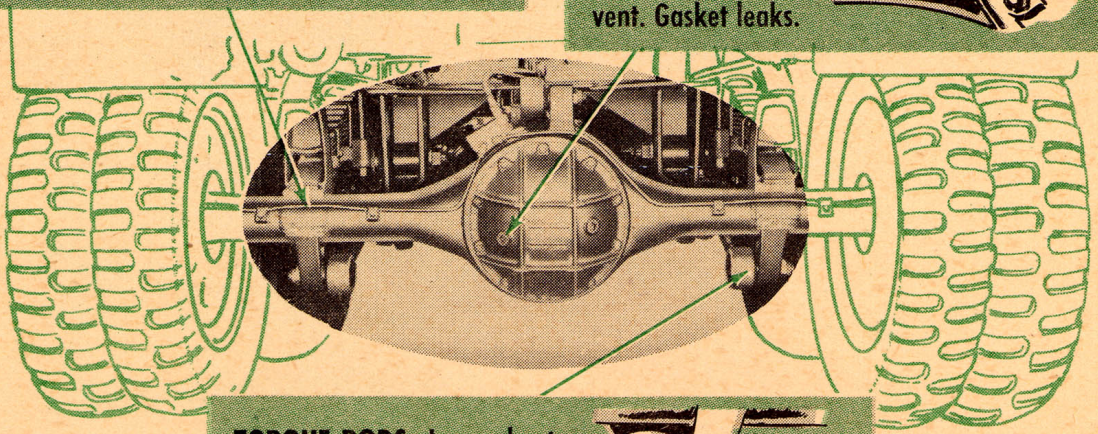
STARTER—Inoperative.

BRAKE LINES and **HOSE CONNECTIONS**—Loose, kinked, frayed, leaking.

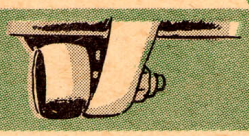


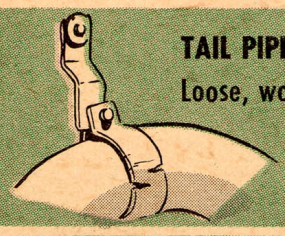
DIFFERENTIAL—Bolts loose, improper lube level (engine cold, lube should be 1/2 inch below level of filler plug). Clogged breather vent. Gasket leaks.





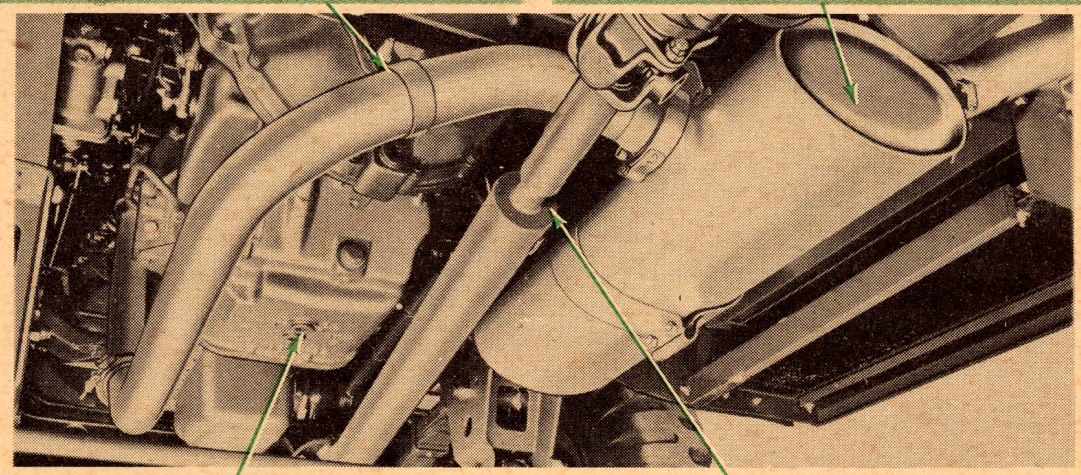
TORQUE RODS—Loose, bent.

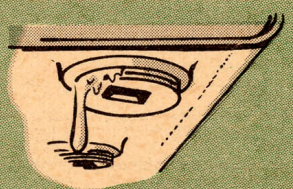




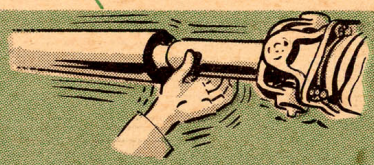
TAIL PIPE and **CLAMPS**—Loose, worn, cracked, dented, clogged, busted.

MUFFLER and **CLAMPS**—Loose, worn, cracked, holes.



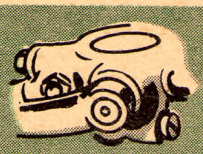


DRAIN PLUGS—Loose, leaking.

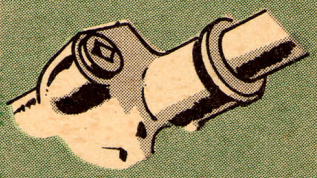


SHAFTS and **UNIVERSAL JOINTS**—Bolts or shaft loose. Universal joints loose.

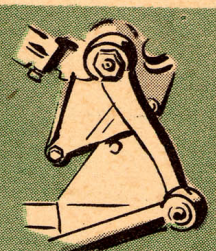
CV JOINTS—G749, rusty, scratched; G742, boots missing or torn.



SHOCK ABSORBERS—Linkage loose, broken.

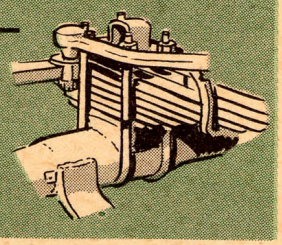


STEERING GEAR FILL and **LEVEL**—Improper level. (Should be one inch below top of filler plug).



STEERING GEAR ARMS and **LINKAGE**—Improperly lubricated, loose, bent.

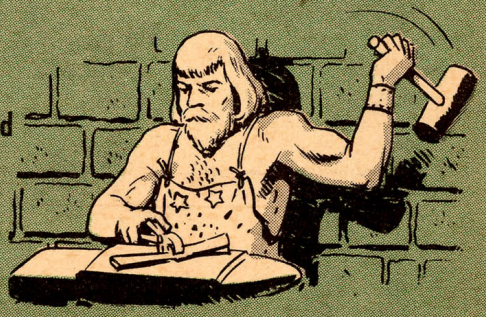
SPRINGS, U-BOLTS, CLIPS, SHACKLES—Lube (should be none), loose U-bolts, loose or missing rebound clips, broken leaves. Shafts—bent, loose. Bolts—loose, missing.



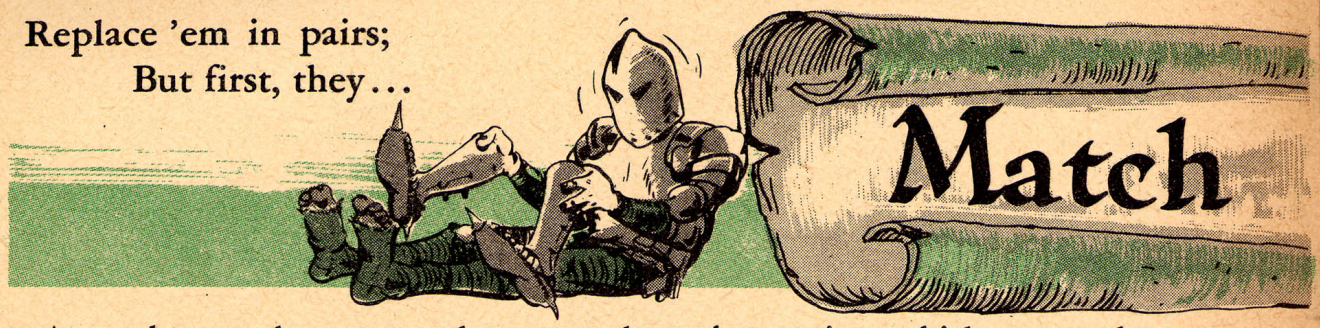
For the Mechanic

To sorta round out your inspection—and just to make sure your truck is really cooking with gas—have your second-echelon shop check these things out for you:

1. Wheel bearings—loose, defective, not properly lubed.
2. Brake linings and shoes—worn, not operating right, loose.
3. Spark plug gap—should be .030 inch.
4. Distributor breaker point gap and tension—point gap should be .022 inch. Lever spring tension should be 17-21 oz.
5. Hydra-Matic shift linkage—loose, bent, not synchronized.
6. Carburetor—improper gas-idle adjustment.
7. Steering—improper adjustment, wander, shimmy.
8. Steering wheel adjustment—should be from 1½ to 2 pounds pull.



Replace 'em in pairs;
But first, they...



Match

As you know, whenever you have to replace a battery in a vehicle, you replace both of 'em. But this doesn't mean that you have to discard either or both. Instead, you get them checked over, charged fully, and matched up in pairs for re-issue as needed. This is done by your support unit.

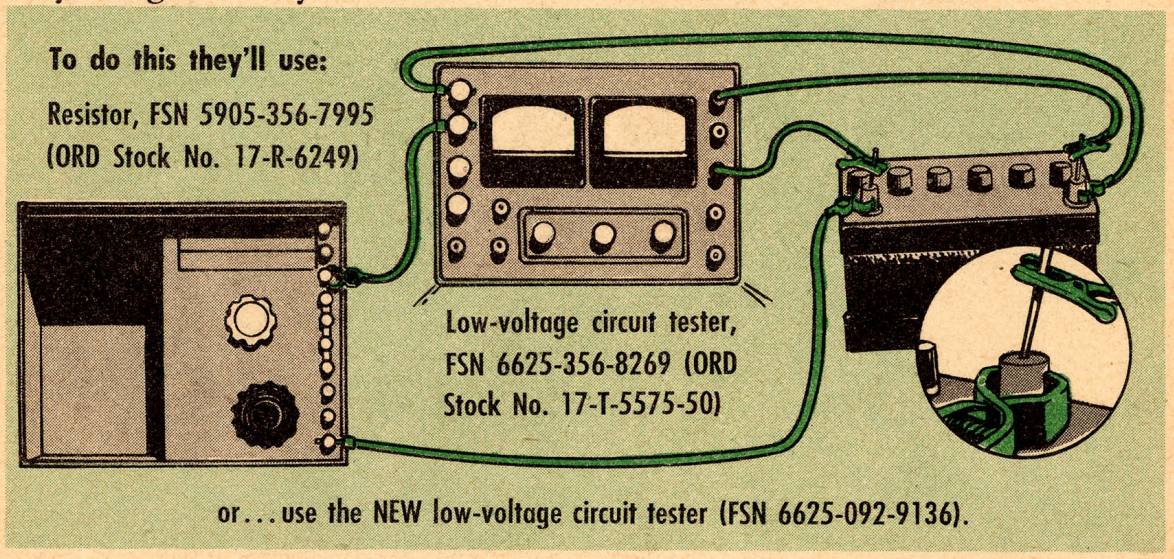
Let's see how they go about it.

First, they go over the batteries to be sure they're clean, dry, not cracked, and that the handles on the 6TN's are tight. And, of course, they make sure that the level of electrolyte in the cells is OK.

When the battery's ready to charge, they charge it fully and carefully according to TM 9-2857, being sure that it stays on the charger until they get no rise in specific gravity at three readings taken an hour apart.

Then they carefully check the specific gravity of each cell. If there's a difference of more than 25 gravity points between cells in any one battery, it's sick and won't be issued.

Now the battery is inspected and fully charged. They'll match it with another fully charged battery to make a team for installation in a vehicle.



Or any more sensitive equipment they happen to have in their shop. They hook up the low voltage circuit tester so that they can draw current from the battery through the load bank, and at the same time measure the voltage. They draw half the rated capacity of the battery—50 amperes for the 6TN's, 22½

Replace 'em in pairs;
But first, they...

Match Your Batteries

As you know, whenever you have to replace a battery in a vehicle, you replace both of 'em. But this doesn't mean that you have to discard either or both. Instead, you get them checked over, charged fully, and matched up in pairs for re-issue as needed. This is done by your support unit.

Let's see how they go about it.

First, they go over the batteries to be sure they're clean, dry, not cracked, and that the handles on the 6TN's are tight. And, of course, they make sure that the level of electrolyte in the cells is OK.

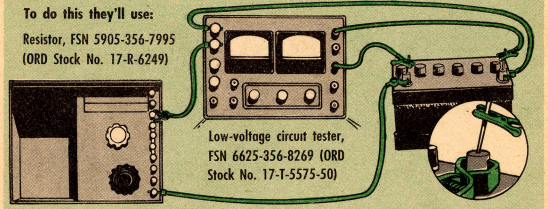
When the battery's ready to charge, they charge it fully and carefully according to TM 9-2857, being sure that it stays on the charger until they get no rise in specific gravity at three readings taken an hour apart.

Then they carefully check the specific gravity of each cell. If there's a difference of more than 25 gravity points between cells in any one battery, it's sick and won't be issued.

Now the battery is inspected and fully charged. They'll match it with another fully charged battery to make a team for installation in a vehicle.

To do this they'll use:

Resistor, FSN 5905-356-7995 (ORD Stock No. 17-R-6249)



Low-voltage circuit tester, FSN 6625-356-8269 (ORD Stock No. 17-T-5575-50)

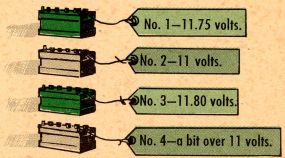
or... use the NEW low-voltage circuit tester (FSN 6625-092-9136).

Or any more sensitive equipment they happen to have in their shop. They hook up the low voltage circuit tester so that they can draw current from the battery through the load bank, and at the same time measure the voltage. They draw half the rated capacity of the battery—50 amperes for the 6TN's, 22½ amperes for the 2HN's—for about 30 seconds, to allow for superficial differences and let the battery output become constant. Then they note the voltage, which will be somewhat less than the no-load voltage.

They match the batteries in pairs which have as nearly equal voltages as possible, within the number of batteries they have on hand. The closer the voltages are, the more evenly matched the batteries.

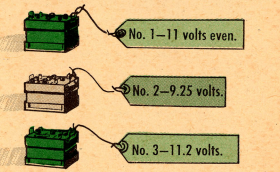
Here's an example of actual tests on four 2HN's.

There's no perfect match, but you can easily see that the best teams would be No. 1 and No. 3 for one pair, and No. 2 and No. 4 for the other pair. This second pair may not last as long as the first pair, but it's an odds-on bet that pairing them like this will get you better service than pairing No. 1 and 2 or No. 3 and 4 would.



Here's another actual test: Three 6TN's were checked at 50 amperes draw. They came out:

You can see that the proper team would be No. 1 and No. 3. Even tho No. 2 is getting dangerously close to the end of its useful life, this No. 2 might be paired up with another battery in the 9-volt range, but only for a vehicle that's not subject to emergency call, and that won't be needed in cold weather—otherwise, better turn it in.



Now, what about tanks? Same thing applies. It is best to keep all four of your tank batteries matched as closely as you can for the same reasons. This will make for lots of work, but it will save batteries.

Careful—to be accurate, all these tests must be made with the voltmeter leads connected directly to the battery posts, by prods, if they are at hand, and not to the carbon pile resistor's cable clamps.

Your Batteries

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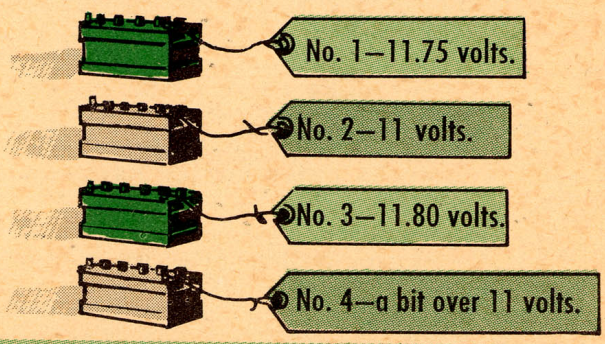

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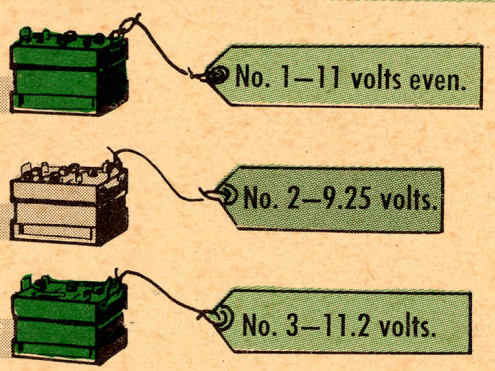

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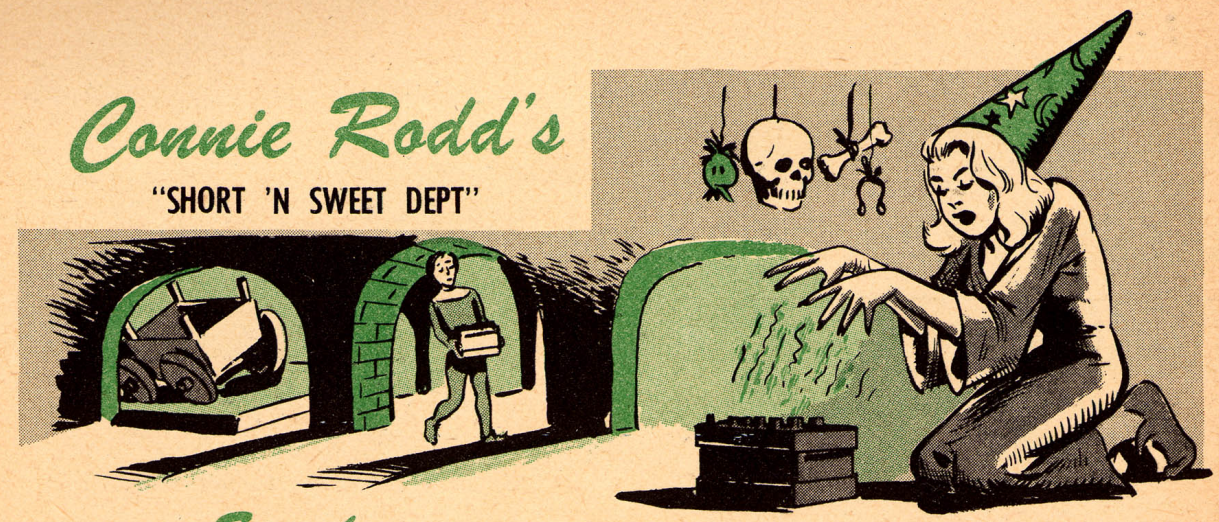
Connie Rodd's

"SHORT 'N SWEET DEPT"



Speak up

Every time one of your batteries dies young or it does something it shouldn't, why keep it to yourself?

The details of this flip can be put to real-good use by the design people — the ones who make those batteries. By knowing these details, the design people will be able to make better batteries for you.

Your voice in better batteries is the UER (DA Form 468). It tells the people up there just what's happening to your batteries under the conditions you're operating.

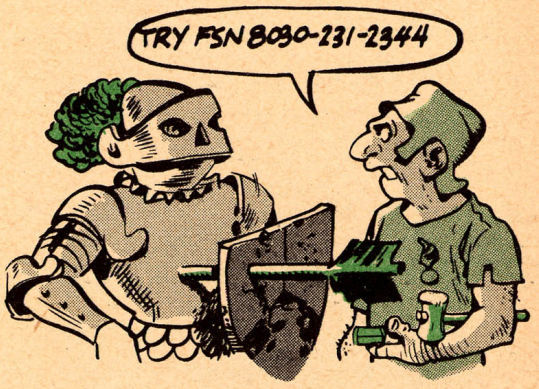
Here's how to get this poop to the right place when your battery conks out too soon:

1. Get a UER and fill it out like it says in AR 700-38 (Nov 55), telling what kind of area you're in — weather, terrain and so on.

2. Get the service date stamped on all batteries off the case. If you're using the old UER Form (dated 1952), put this dope in the "Total Time in Use" box. Got a new 468 (dated 1955)? Then, put this service date in the "Details" column.

3. Send the whole kit-and-caboodle to the Chief of Ordnance, Department of the Army, Washington 25, D. C., ATTN: ORDFM.

Rust holder



Rust can wreck equipment just as bad as armor-piercing ammo does. It may be slower, but the destruction will be just as complete.

But did you know that when you can't get to the rust for awhile, because of other important chores, you can coat the equipment with rust-arrester and this'll hold it until you can get around to it? FSN 8030-231-2349 will provide you with one gallon of Rust-Arresting Coating. FSN 8030-231-2344 will get you a five-gallon can.

Before applying the stuff, wire-brush or sand those loose flakes of rust. The coating will last about one year.

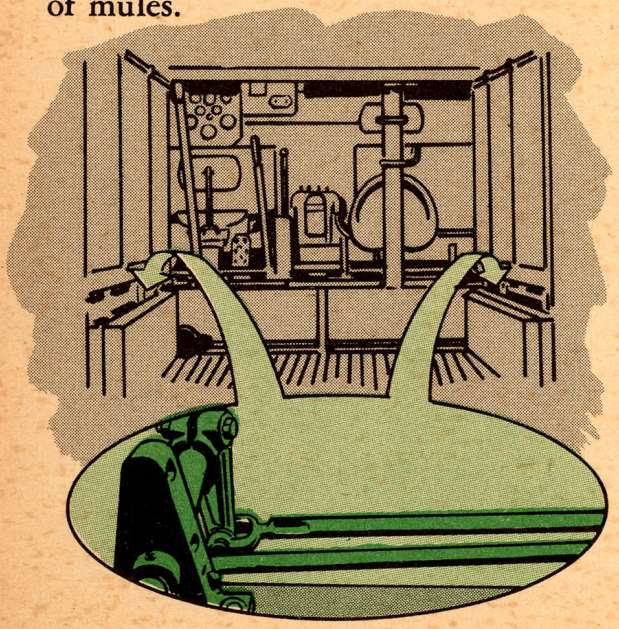
TM 9-1007 gives you all the dope on the rust-arresting coating.

Remember: The coating is only temporary. It covers the rust with a soft film that won't act as a base for paint. When you're ready to paint, you've got to clean the rusted area down to bare metal.

The thought of all that extra work makes you want to be sure you haven't time to paint the equipment right away.

Keep off

An armored division took a long hard look at its M59 Armored Personnel Carriers recently and found that a third of them had bent transmission control rods, (G280-8341345 and G280-8341347). 'Cause why? 'Cause o' big feet. Yep, the boys had been stompin' around in there like a herd of mules.



Now you're no mule, likewise no jackass, so of course you're careful where you drop your boondockers when you're slippin' into the saddle of the M59. But maybe some of your gang aren't quite so sharp, so please to remind 'em about not stepping, standing or stomping on those control rods.

The situation is going to improve, however, because there's a new cover coming that'll protect these rods.

Less light

Comes the light — but it isn't helping the gunner to get on target when he aims through the M20 series periscope in the M48 and M48A1 tanks.

The light comes from the gun-ready indicator and it's a pain in the eye.

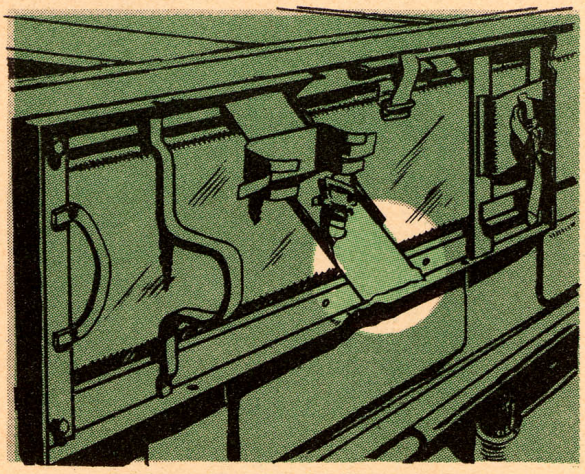
But, there's a way to cut down the light.

You know that red enamel used on lubrication fittings and oil cups? Requisition Eng Stock No. 52-3473.700.003 and you'll get a pint of the stuff.

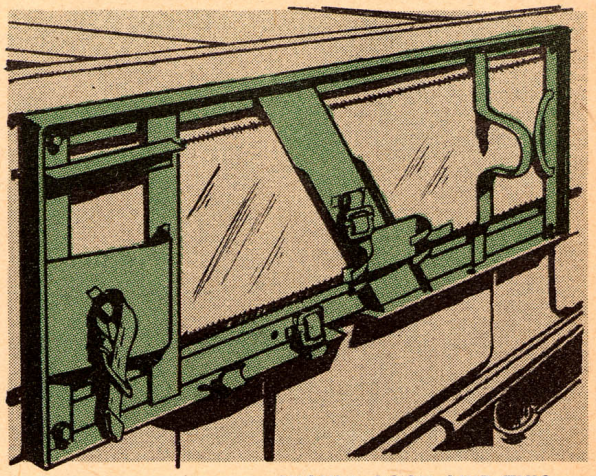
When the paint arrives, clean the end of the indicator tube with some dry cleaning solvent or paint thinner to get rid of dirt and grease. Then . . . with a soft brush in hand . . . apply a thin, even coat of paint to the end of the tube.

You can see what kind of job you're doing by painting with the light on. You may need two coats to get the dimness you want.

Bottoms up. 'Tain't so good if it happens to be the pioneer tool rack on your truck. 'Fore you end up with a bent rack, and 'fore you lose your axe, better cast an eye on that rack to make sure yours is not one of those that've been installed upside down.



RACK INSTALLED UPSIDE DOWN WILL BEND

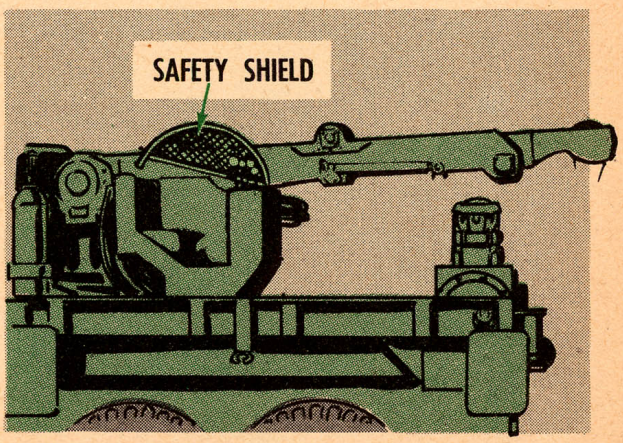


SHOULD LOOK LIKE THIS

Arm yourself

The latest on your different kinds of wreckers — the M62 5-ton, the M60 2½-ton and the M108 2½-ton — is that you'll get a safety shield put on 'em to keep the crane operator from looking like a left-hand profile shot of Venus de Milo.

When the crane operator's in the cab operating his shipper, unconsciously he can rest his arm on the armchair-like shipper cradle when the shipper's up. If it slips his mind to take his arm away when the shipper's lowered, he'll find himself a candidate for a medical discharge. This safety shield will keep him from putting his hand where it doesn't belong.

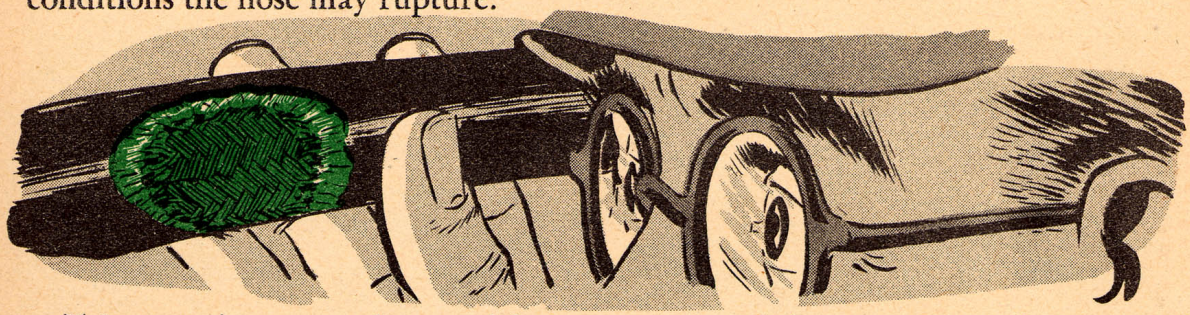


MWO Ord G1-W86 (3 Aug 56) tells your Ordnance outfit to go ahead with the job; it's marked *urgent*.

Hydraulic hose wear

Take a look at any hydraulic hose lines . . . if the outside layer is worn or frayed, chances are you'll soon be in for trouble.

The reinforcing wire under the worn part is open to rusting, and under field conditions the hose may rupture.



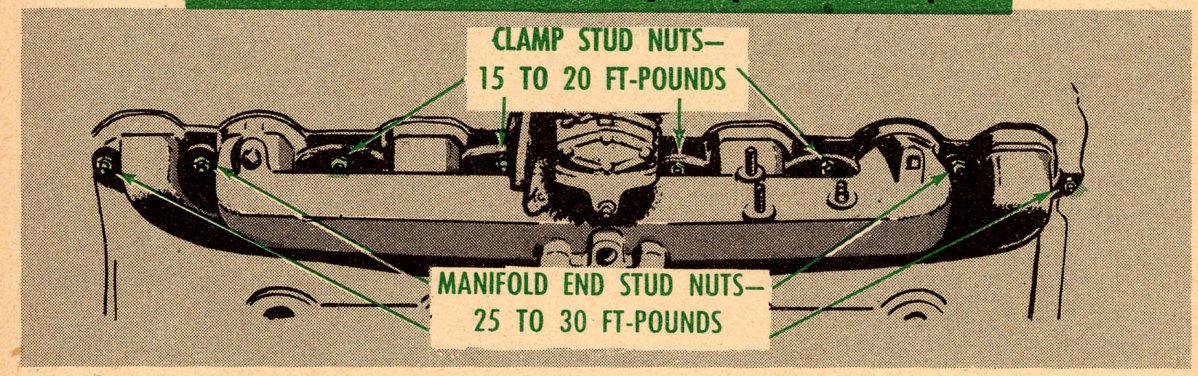
Take a squint at your hose and fittings every week for any wear and leakage. If your hose is worn or fittings leak, replace 'em pronto.

Need the creeps?

The main reason G749 2½-ton truck manifolds crack is because the studs and nuts get torqued too tight.

When your engine heats up, too much torque causes the manifold clamp to collapse, causing little or no clearance between the manifold and its clamps. No clearance and your manifold won't be able to creep as it heats up and cools off. The outcome, of course, can be a crack in the manifold.

Here's how those torque specs line up:



1. Manifold end stud nuts — 25 to 30 foot-pounds. When tightening up on these, make sure the manifold is held right close and firm against its gaskets.

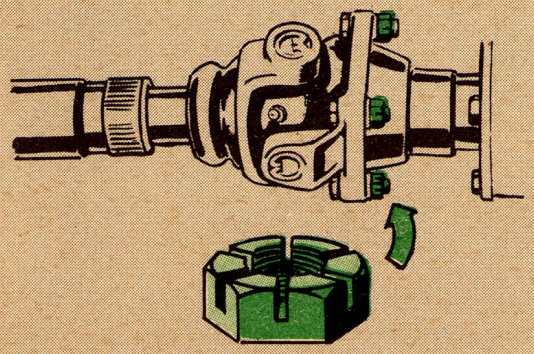
2. Clamp stud nuts — 15 to 20 foot-pounds. And NEVER more than 20 foot-pounds or you could collapse those clamps.

Also, that manifold heat-control-valve should always be set like TM 9-8024 says.

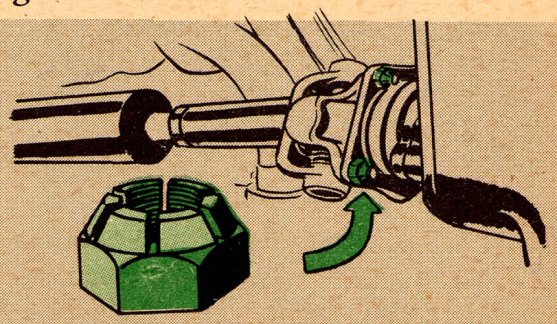
Sloppy shaft

Tighten 'em up, man, before you find 'em dragging along behind you. Talking about the prop shafts on your G742 and G749 2½-ton trucks and your G744 5-tonners.

The nuts used on these shafts are self-locking. Once they're removed, they won't give the tight fit the shaft needs, so if you've been working on those shafts and removed the nuts, get rid of them and get new ones.



For G742 and G744 series trucks use Nut, self-locking, hexagon (Ord Stock No. H001-4040541)



For G749 series trucks only use either Nut, self-locking, hexagon (Ord Stock No. H001-4040541) or Nut, self-locking, hexagon ("Hug lock" type) (Ord Stock No. H101-0442800 or H101-0442801)

Now, if you can't get self-locking nuts for one reason or another, bolt your prop shafts up with a regular nut, but please make sure you use lockwashers. These'll do till you can get your hands on the nuts of the self-locking variety.

Won't flap now

Been quite a lot of talk lately about whether you can or can't get those receptacles, push-on nuts and snap-fastener caps that hold the instrument cluster mounting plates on the dashes of your G740, G758, G741, G742 and G744 trucks. The word now is that you can get the whole shebang.

Gotta watch it, tho, 'cause you get those parts from different services.

HERE'S HOW THEY STACK UP:

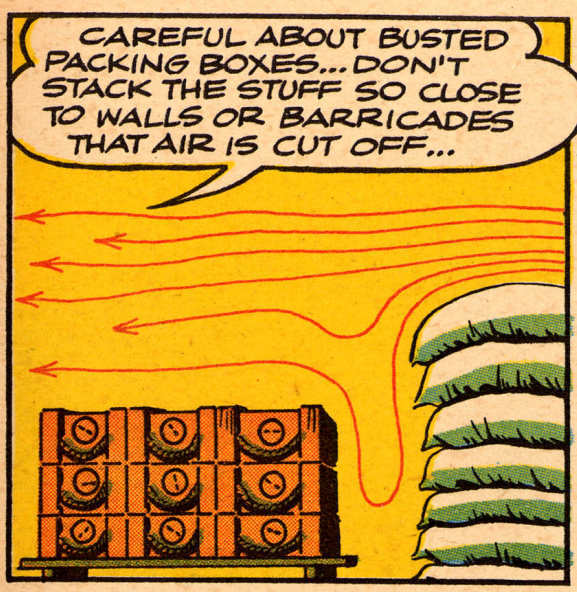
RECEPTACLE—FSN 2510-753-9255 G742 (Ordnance).

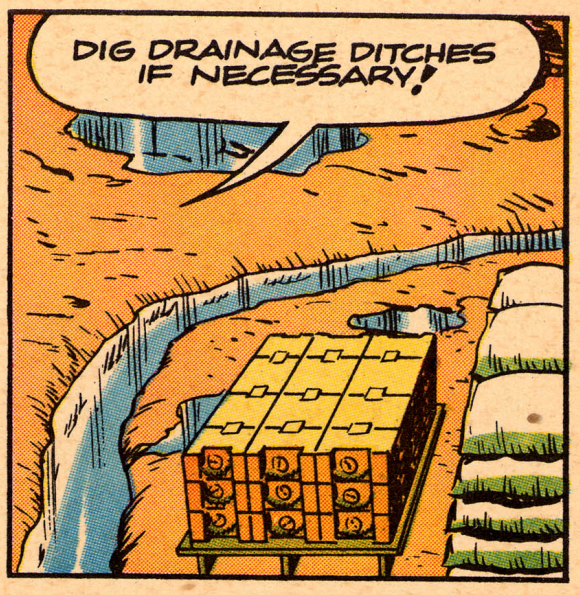
PUSH-ON NUT—FSN 5310-752-6591 G742 (Ordnance, too).

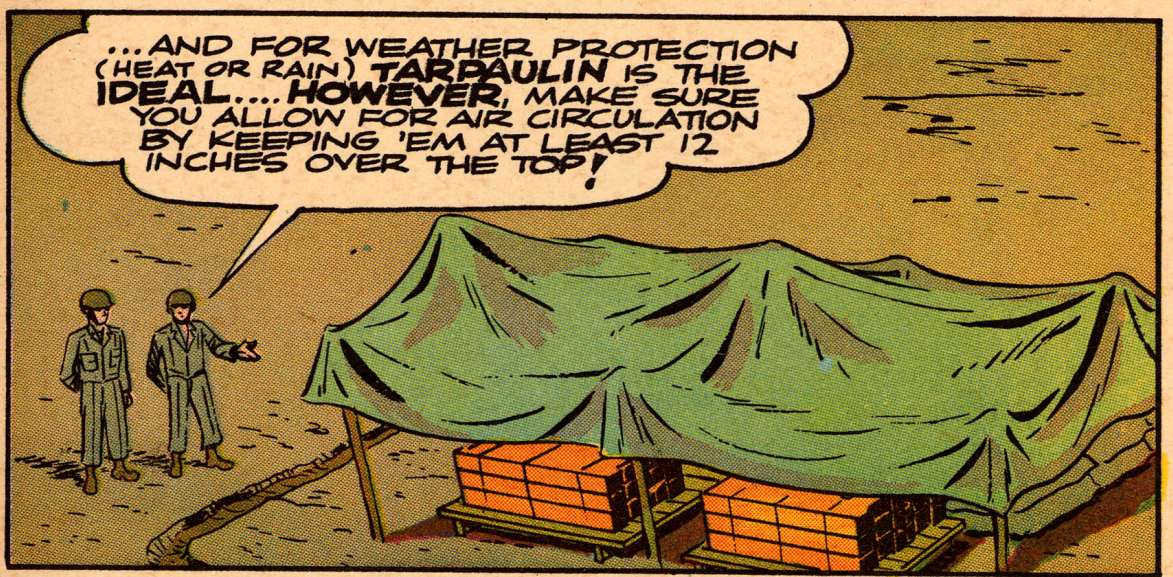
CAP, SNAP FASTENER—FSN 5325-285-3356 (Quartermaster). This was known as Stud (QM Stock No. 42-S-26900-25); and before that it was an Ordnance item and went under Ord Stock No. H002-7526590.

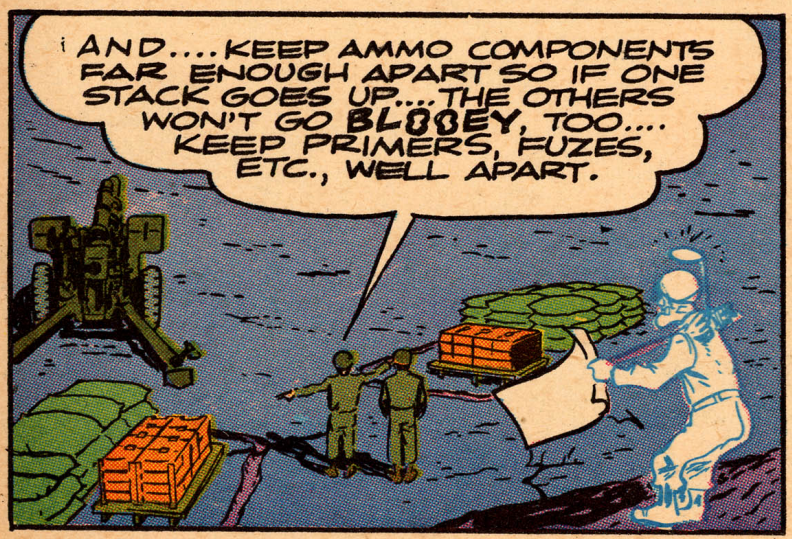
JOE'S DOPE
The Saga of Ammo Mike
OR
DON'T SHOOT DIRTY AMMO IN A CLEAN PIECE
LOADING ROUNDS WAS SIMPLE STUFF FOR AN ACE CALLED AMMO MIKE; HE SHOVED THEM IN REAL SLICK AND FAST, YOU NEVER SAW THE LIKE.
HE GRABBED THE ROUNDS UP LIKE A FLASH, AND SLAPPED 'EM INTO PLACE; THE OTHER CREWS MADE SAFETY CHECKS, BUT NOT THIS STUPID ACE!
BURRS AND DENTS AND GREASE AND DIRT WERE CHECKS HE DID NOT MAKE; WHILE OTHER CREWS INSPECTED ROUNDS MIKE TOOK A COFFEE BREAK.
A LETTER EDGED IN BLACK TELLS OF... THE UNFORTUNATE HIS SLOPPY SPEED AT LAST PAYS OFF— MIKE'S WORTH TEN THOUSAND NOW.
KA-POW!
SOB
SLOBBER...
...HEY WAIT, BOYS, WHILST Y'R FEELIN' SO SORRY FER ME... HOW ABOUT YOUR OWN SET UP ??? SIGH GUESS THEY CAN'T HEAR ME... SOB... NOW.

I REALLY OUGHTA HELP THOSE BOYS OR THEY'LL MEET THE SAME FATE I DID....AHA! THERE'S A COUPLE OF CHARACTERS FROM MY OL' BATTERY..... GAD, WHAT A SLOPPY STACKING JOB.... MAYBE I CAN INFLUENCE 'EM!
WELL, WE'VE GOT OL' BETSY READY---- BEST 105 IN THE CORPS!
YAWN....
IT'S A SHAME THE WAY YOU'RE HANDLING THAT AMMO!!
YEAH... IT'S A SHAME THE WAY YOU'RE HANDLING THAT AMMO. ESPECIALLY AFTER THE WAY WE'VE BEEN WORKING ON OUR GUN!
HUH???
FOR AMMO KEPT IN THE IMMEDIATE AREA F'R INSTANCE ...THE FIRST THING TO WORRY ABOUT IS STORAGE!!
?!?!
USE PLENTY OF DUNNAGE WHEN MAKING PILES!
KEEP THE AMMO AT LEAST SIX INCHES OFF THE GROUND... STACK BY LOT NUMBER OF COURSE.

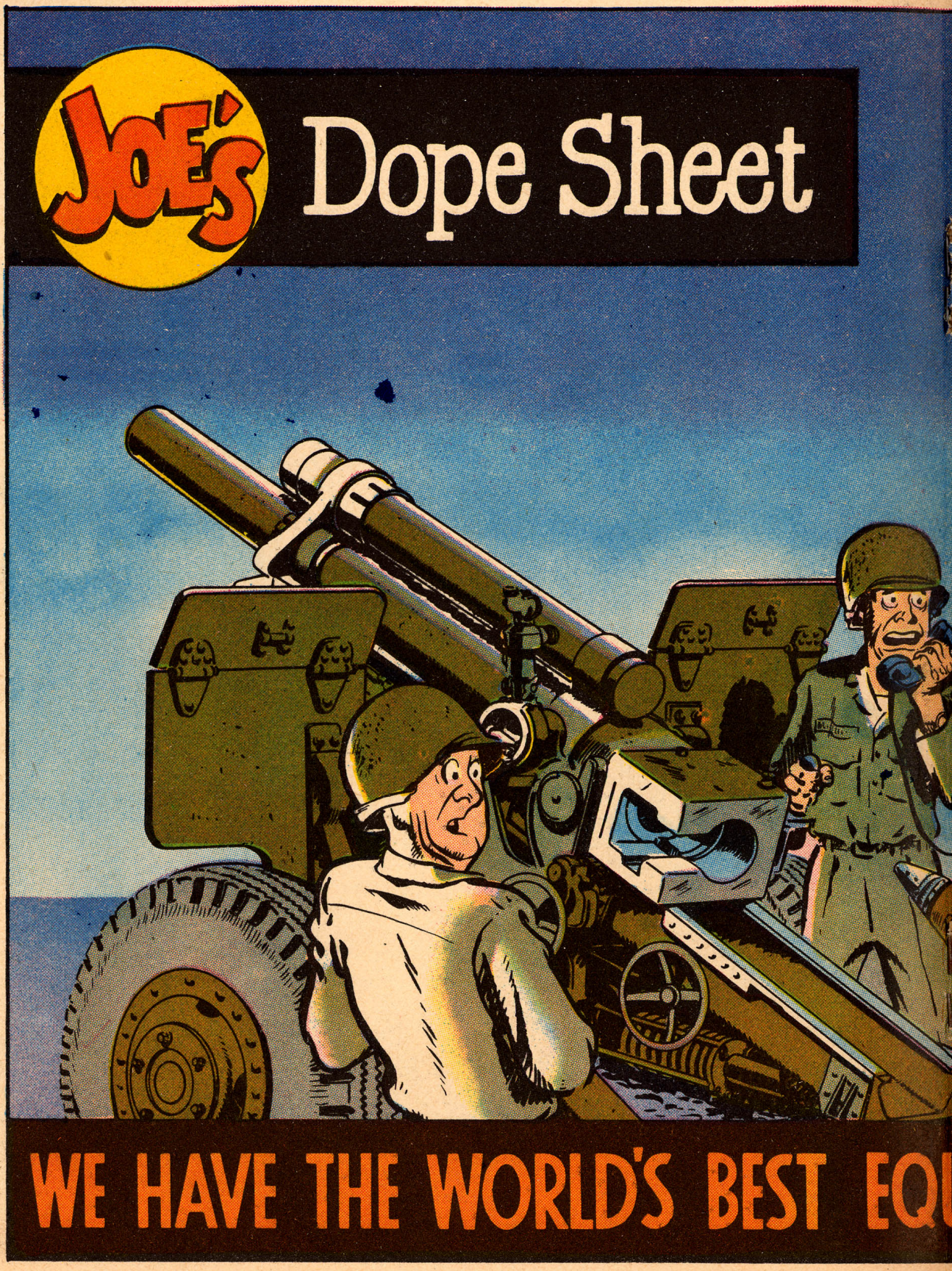

CAREFUL ABOUT BUSTED PACKING BOXES... DON'T STACK THE STUFF SO CLOSE TO WALLS OR BARRICADES THAT AIR IS CUT OFF...


DIG DRAINAGE DITCHES IF NECESSARY!


...AND FOR WEATHER PROTECTION (HEAT OR RAIN) TARPAULIN IS THE IDEAL.... HOWEVER, MAKE SURE YOU ALLOW FOR AIR CIRCULATION BY KEEPING 'EM AT LEAST 12 INCHES OVER THE TOP!

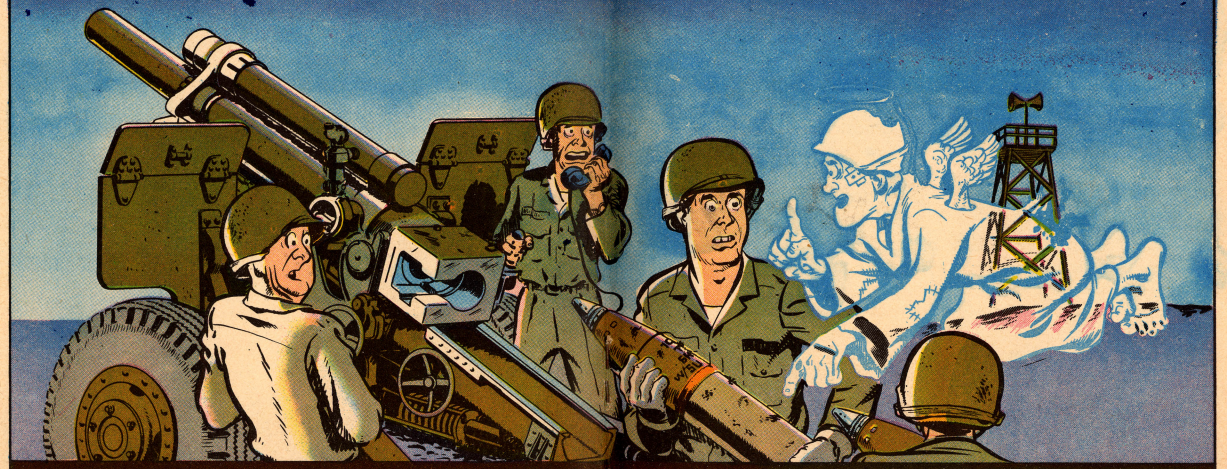

AND.... KEEP AMMO COMPONENTS FAR ENOUGH APART SO IF ONE STACK GOES UP.... THE OTHERS WON'T GO BLOOEY, TOO.... KEEP PRIMERS, FUZES, ETC., WELL APART.

HEY, WHERE'D YOU GET THIS PIN UP??
DUNNO, BUT LET'S POST IT UP!

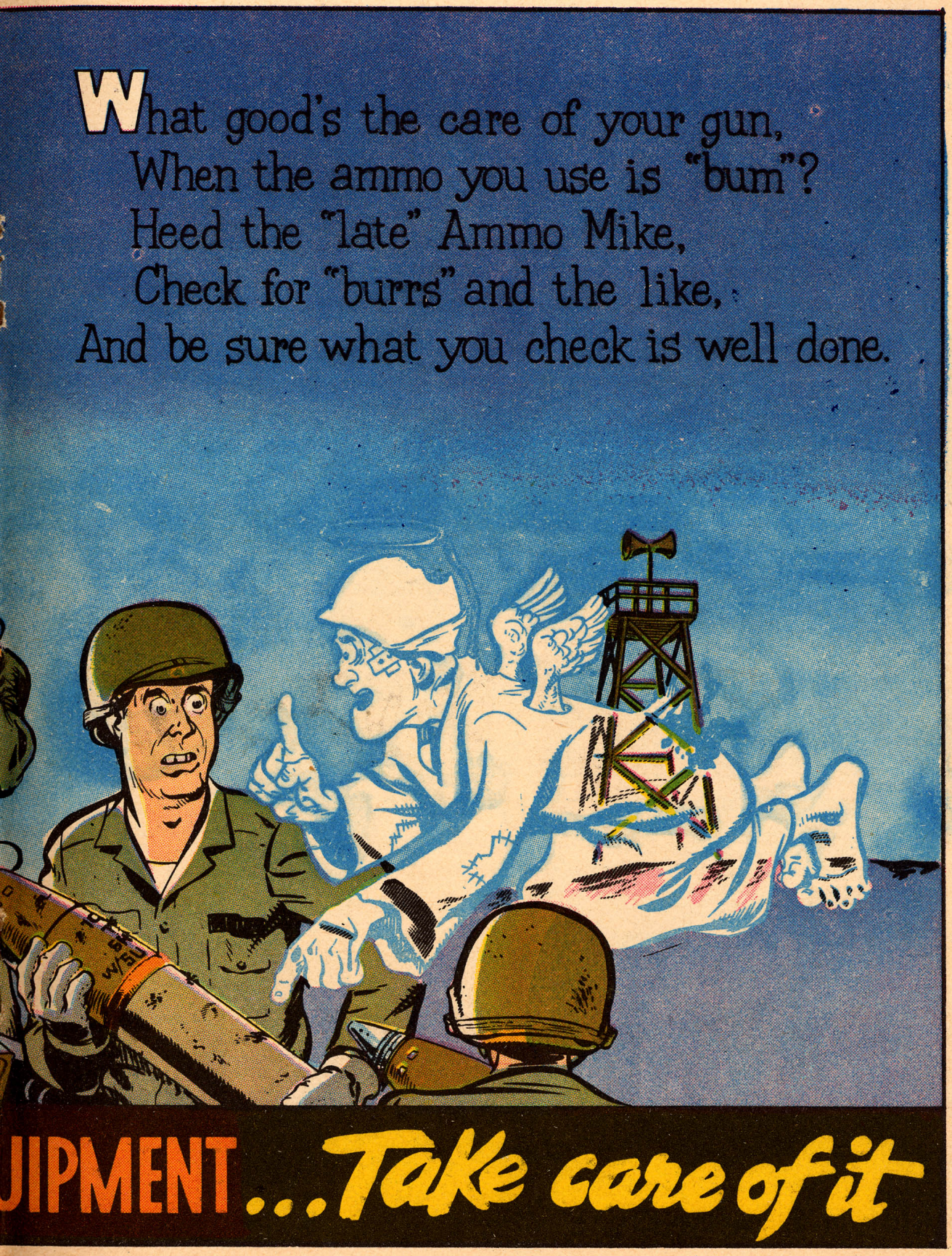

JOE'S
Dope Sheet
WE HAVE THE WORLD'S BEST EQU

JOE'S Dope Sheet

What good's the care of your gun,
When the ammo you use is "bum"?
Heed the "late" Ammo Mike,
Check for "burrs" and the like,
And be sure what you check is well done.



WE HAVE THE WORLD'S BEST EQUIPMENT...*Take care of it*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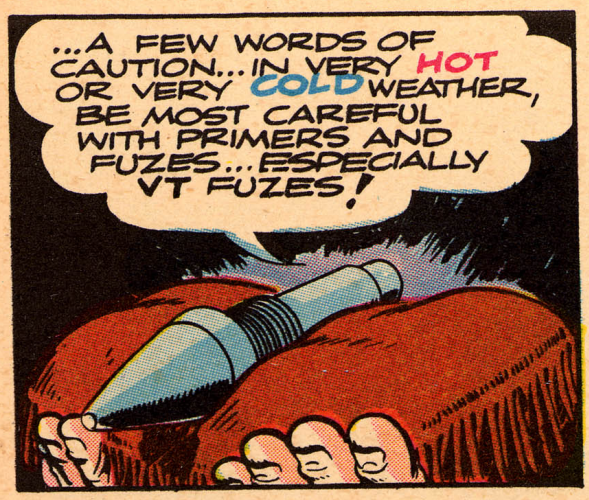
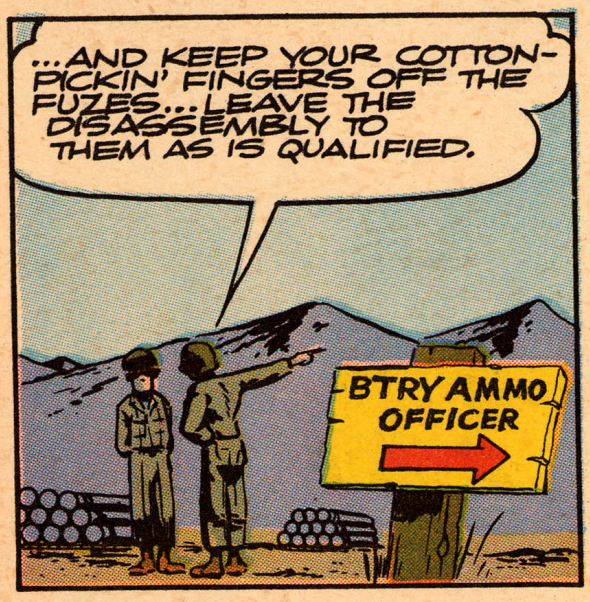
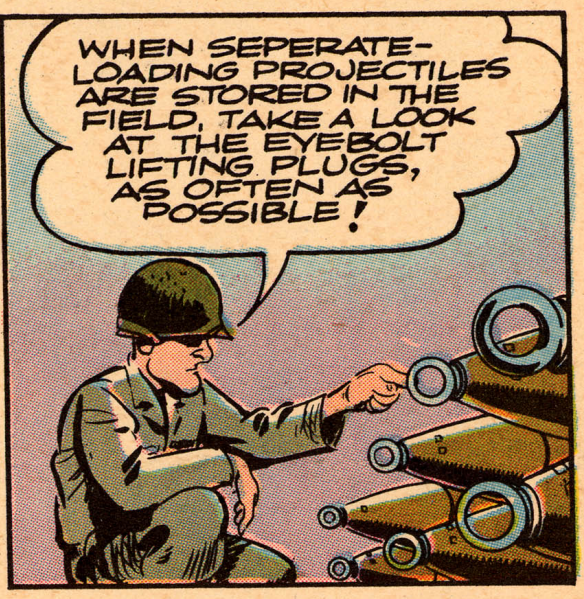
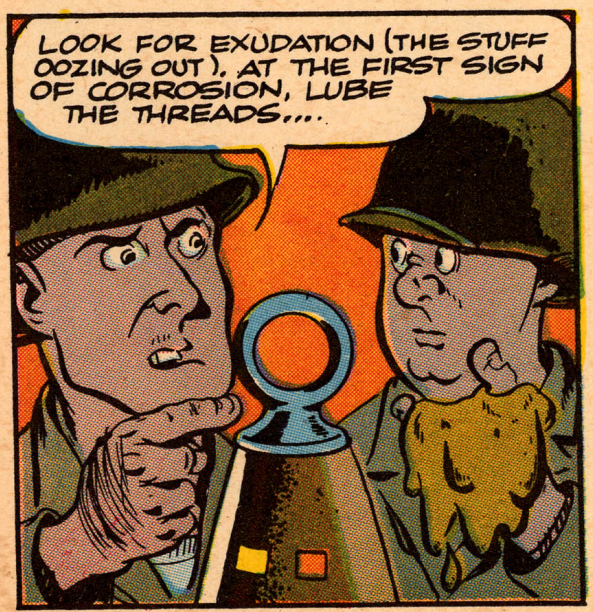

...A FEW WORDS OF CAUTION... IN VERY HOT OR VERY COLD WEATHER, BE MOST CAREFUL WITH PRIMERS AND FUZES... ESPECIALLY VT FUZES!

...DON'T REMOVE SAFETY DEVICES UNTIL JUST BEFORE USE....


...AND KEEP YOUR COTTON-PICKIN' FINGERS OFF THE FUZES... LEAVE THE DISASSEMBLY TO THEM AS IS QUALIFIED.
BTRY AMMO OFFICER


WHEN SEPERATE-LOADING PROJECTILES ARE STORED IN THE FIELD, TAKE A LOOK AT THE EYEBOLT LIFTING PLUGS, AS OFTEN AS POSSIBLE!


LOOK FOR EXUDATION (THE STUFF OOZING OUT). AT THE FIRST SIGN OF CORROSION, LUBE THE THREADS....

...BUT VERY, VERY L-I-G-H-T-L-Y!

WHEN YOU'RE FIRING... FOR HEAVEN'S SAKE, LOOK OVER EACH ROUND AS IT'S PASSED ALONG TO YOU...
WATCH FOR NICKS, DENTS, EXTRA GREASE... OR DIRT FROM THE AREA....
IT'S WORTH THE EXTRA TROUBLE TO WIPE 'EM OFF WITH A CLEAN CLOTH.
IN A TACTICAL SITUATION THE SAME ROUTINE OF INSPECTION IS S.O.P.... ONLY YOU DO IT MORE OFTEN... (FOR REASONS THAT THE ENEMY WILL MAKE ONLY TOO CLEAR).

IN NORMAL OPERATIONS DON'T BREAK THE CONTAINER SEALS UNTIL YOU'RE READY TO FIRE.
...AND REPLACE SAFETY WIRE ON ROUNDS WHICH ARE PREPARED FOR FIRING... BUT WHICH DIDN'T GET USED!
AND OF COURSE TURN IN A QUICK REPORT ON DEFECTIVE AMMO (...AND THE LOT NUMBER IT'S IN).
TELL ME.... YOU'RE THE WORST GOOF-OFF IN THIS BATTERY ...HOW'D YOU SUDDENLY GET SO WISED UP?
DUNNO... IT JUST CAME TO ME ALL UFFA SUDDEN!
Hey...MOAN... You guys GASP stacked me into the AMMO...HALP HALP...LEEME OUTTTT!
BUT CONNIE, I KEEP HEARIN' A LITTLE VOICE...
NONSENSE.. THERE'S NOTHING HERE EXCEPT A FINE JOB OF AMMO STACKING...YOU SHOULD BE PROUD!
HALP

TARPSICHORE

Dear Half-Mast,

Because we don't have the stock number or nomenclature for our M215 2½-ton dump truck canvas, we haven't been able to log them into our property and inventory books the right way.

The stuff isn't in the SNL's and no one seems to know the proper nomenclature and stock numbers. Can you help us?

Lt L. P. P.

Dear Lt L. P. P.,

You can now get that canvas as part of a kit. If you have to order it, the kit's FSN is 2520-834-5215. This kit also has some other gadgets, such as canvas-attaching gismos and racks you can use in your dumpers as troop seats.

Here's how the kit breaks down:

Body paulin (tarpaulin, body assembly)—FSN 2540-521-6182 (G749).
Front end curtain (cover, dump body cab protector, assembly) —FSN 2540-521-6181 (G749).
Rear end curtain (curtain, body end, assembly) —FSN 2540-521-6180 (G749).
Top bow (bow, top piece)—FSN 2510-293-4730 (G749).
Side bow (bow, side, piece)—FSN 2510-521-6183 (G749).
Rack and seat, assembly—FSN 2510-521-6184 (G749).
Hinge, troop seat—FSN 2540-521-6179 (G749).
Pin, hinge—FSN 5315-737-0134 (G749).
Bow, corner assembly—Ord Stock No. H017-0540404.
Strap, bow-roll—Ord Stock No. H003-0545558.

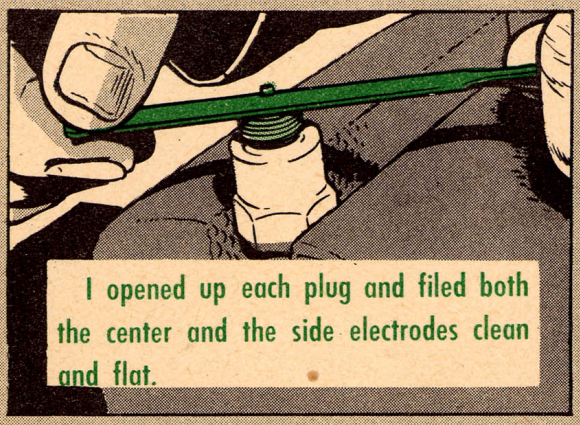
CLEAN AND FLAT

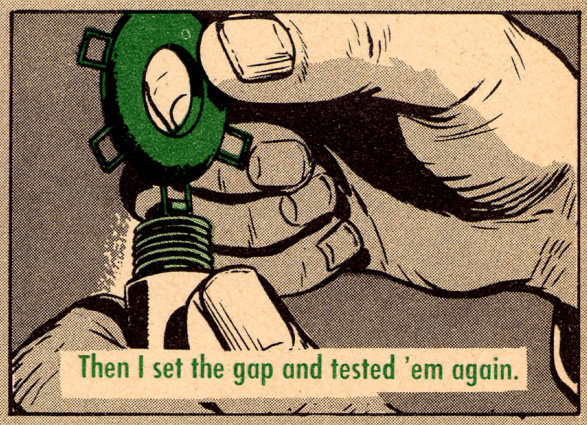
Dear Half-Mast,

Some time ago you were talking about cleaning spark-plugs. Remember, you told us to open up the electrodes and file the end of the center wire clean and flat before we set the gap?

Well, I gotta admit it—I thought that was so much bunk. You know, theoretical perfection, but not for busy men. By golly, here yesterday I was cleaning and checking a set of plugs that I didn't think had anywhere near enough miles on 'em. After sandblasting, they were cutting out at about 80 pounds on the tester.

So, just for kicks and to save the cost of a new set of plugs, I tried your trick.





You were right—there wasn't one that didn't go over 100 pounds, and most of 'em went to 120. What's more, the engine isn't dogging any more.

SFC D. J. C.

Dear Sgt D. J. C.,

Tell you what, you try a couple more of those li'l tricks you find in PS. You'll find lots of 'em work pretty good. You see, the **next** grease on Connie's and my hands won't be the **first** grease on 'em by many, many years.

Half-Mast

CLEANING DAY BLUES

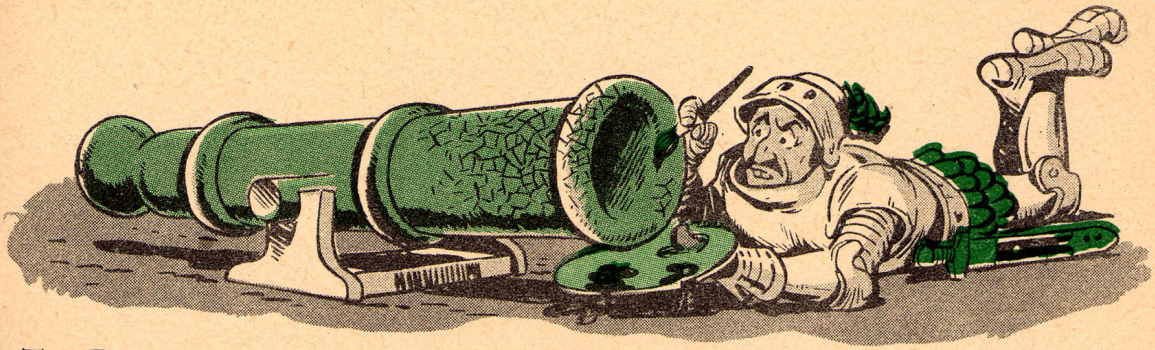
Dear Half-Mast,

Things have been happening to the painted surfaces of our artillery pieces. After we use paint thinner to get rid of the grime, the paint becomes discolored and looks like it's cracking. Are we using the right cleaner?

Lt V. A.

Dear Lt V. A.,

There's nothing wrong with using paint thinner as long as you space the cleanings about a week apart. I've got a hunch your trouble may be with the paint itself. It may not be in good shape to begin with.



Try Detergent, painted surface, powdered (P-C-431, type 1) 5-lb cntr, FSN 7930-249-8036. Use a cloth, sponge or brush to apply the stuff. The can'll tell you how much water you should use.

If you still get a discoloration, you can make a coupla moves. If it's a new weapon, file a UER report. Otherwise, a new paint job is in order.

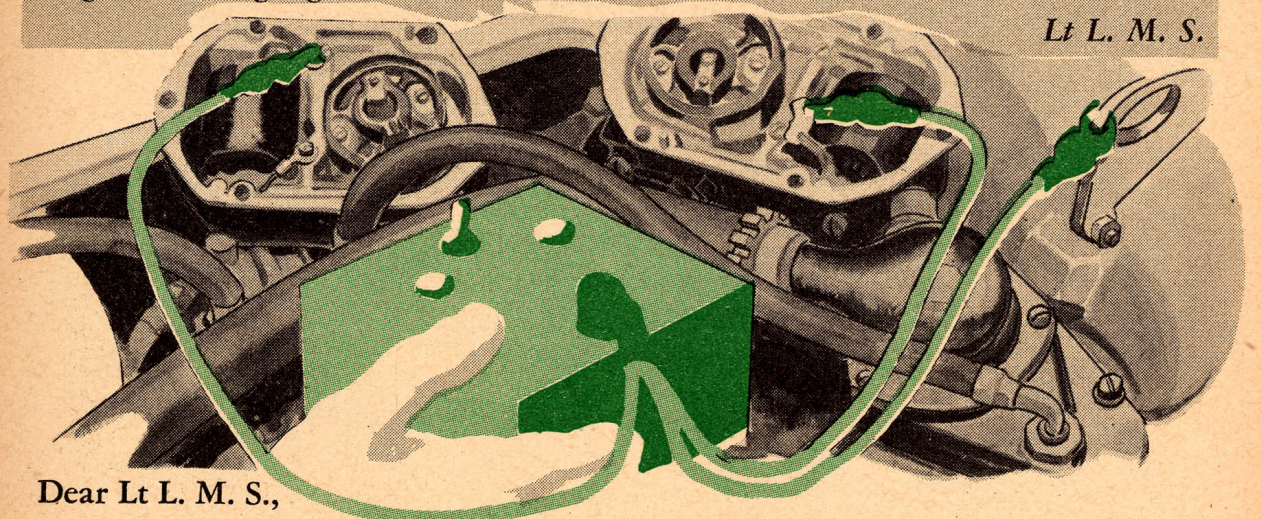
Half-Mast

TANK TIMING LIGHT

Dear Half-Mast,

We have our new timing light, FSN 6625-378-2073 (Ord Stock No. 17-L-12936-300), and it works fine on wheeled vehicles. But we can't time the AV-1790 engines in our tanks. Is there any way we can get back one of the old-fashioned magneto timing lights, Ord Stock No. 41-L-1439?

Lt L. M. S.



Dear Lt L. M. S.,

You're right. The Light, timing, power, blue white light, comb 6, 12, and 24-volt, Ord Stock No. 17-L-12936-300 is not meant to time twin ignitions.

The old Light, timing, magneto, Ord Stock No. 41-L-1439 is going back into the tool set, Organizational Maintenance, No. 1 and No. 2 Common. That, as you know, is the light to use on your tanks . . . so requisition yours pronto.

Half-Mast

UNDER CONTROL

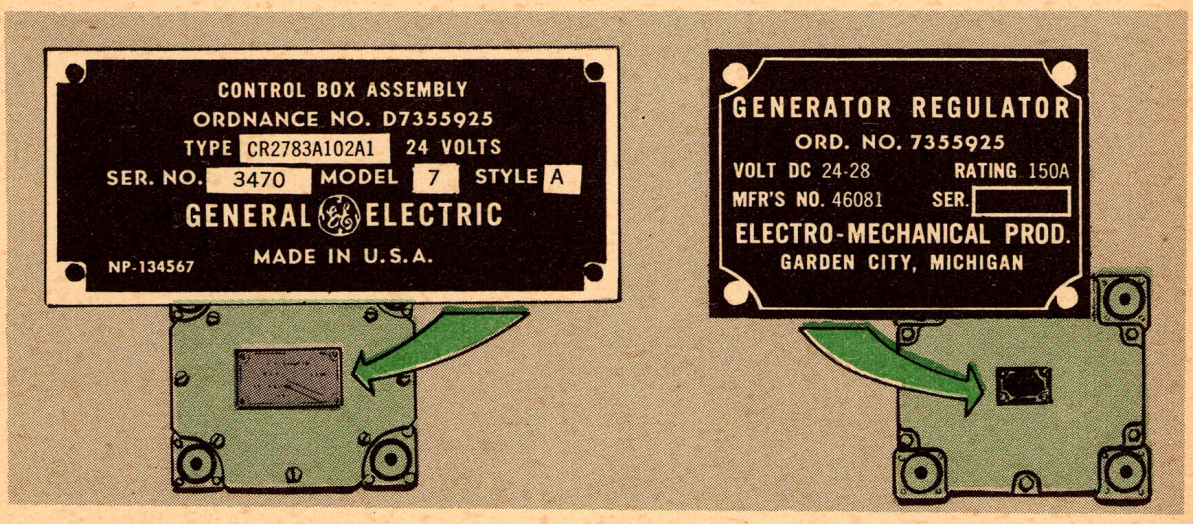
Dear Half-Mast,

We are changing our main engine generators from 150 amps to 300 amps on our M48 tanks. What control box do we use for these?

CWO R. H.

Dear Mr. R. H.,

The only generator control box which will handle the 300-ampere generator in your M48 tanks is the General Electric or Electro-mechanical box, Ord Stock No. G260-7355925. This box is listed in Ord 7 SNL G254 on page 44.



Since this box is listed for issue only after the Eclipse-Pioneer box, G251-7528304 and the Delco-Remy box, G251-7968600 are exhausted, it will be necessary for you to contact your Ordnance support and tell them that you need GE boxes to work with 300-ampere generators.

There are internal differences in the boxes which will not allow the Eclipse and Delco models to handle the larger output generators. The General Electric box uses a different method of current limiting, and will work with the 300-ampere job just as well as it does with the 150-ampere model. No change in the box is necessary.

Any of these boxes will theoretically control either the 150-ampere generator or the 300-ampere generator to a limit of 150 amperes. This is supposed to be sufficient power output for the M48 tank's electrical requirements, so it was planned to use up the existing stocks of control boxes, G251-7528304 and G251-7968600 as they were required.

However, field experience has shown that in tanks equipped with the 300-ampere generators, sudden surges of the electrical loads can cause failure of the earlier boxes. Consequently, if you have a tank equipped with a 300-ampere generator which requires a control box replacement, and it has either the G251-

7528304 or the G251-7968600 control box, you should have the G260-7355925 (FSN 5940-735-5925) box to control it. Explain this to your Ordnance support unit, and they'll get you the proper box. If your tank engine is still equipped with the 150-ampere generator, any one of the three boxes listed above will control it OK.

Some later-production tanks are equipped with the newest control box, FSN 2920-335-4264. This box will control either the 150-ampere generator or the 300-ampere generator just fine.

Since the newest box is not interchangeable on the mounts with the earlier boxes, be sure that you get a similar box if you need a replacement.

Half-Mast

LEAK PROOF

Dear Half-Mast,

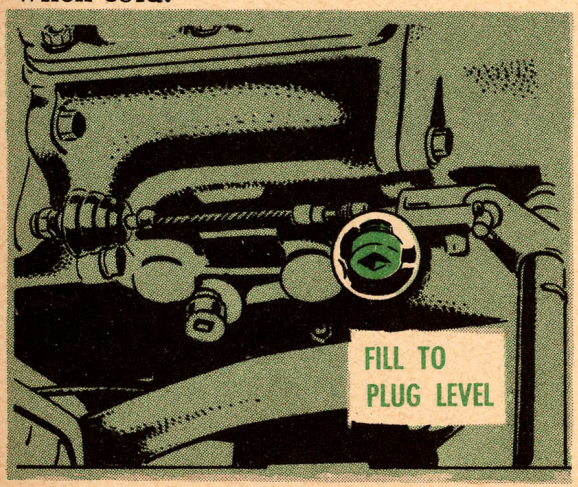
Oil leaking up around the transmission shift lever on our M38 and M38A1 Jeeps has become a problem. Most of our Jeeps are just oozing with the stuff.

What can we do to stop this?

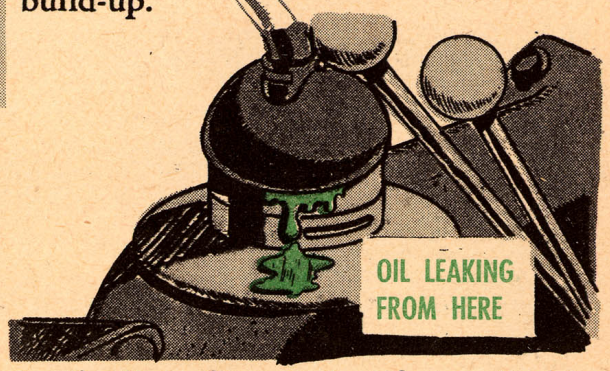
WO R. P.

Dear Mr. R. P.,

First off, make sure you never overfill that transmission. It should be checked at every B service—and make sure the lube only goes up to plug level when cold.

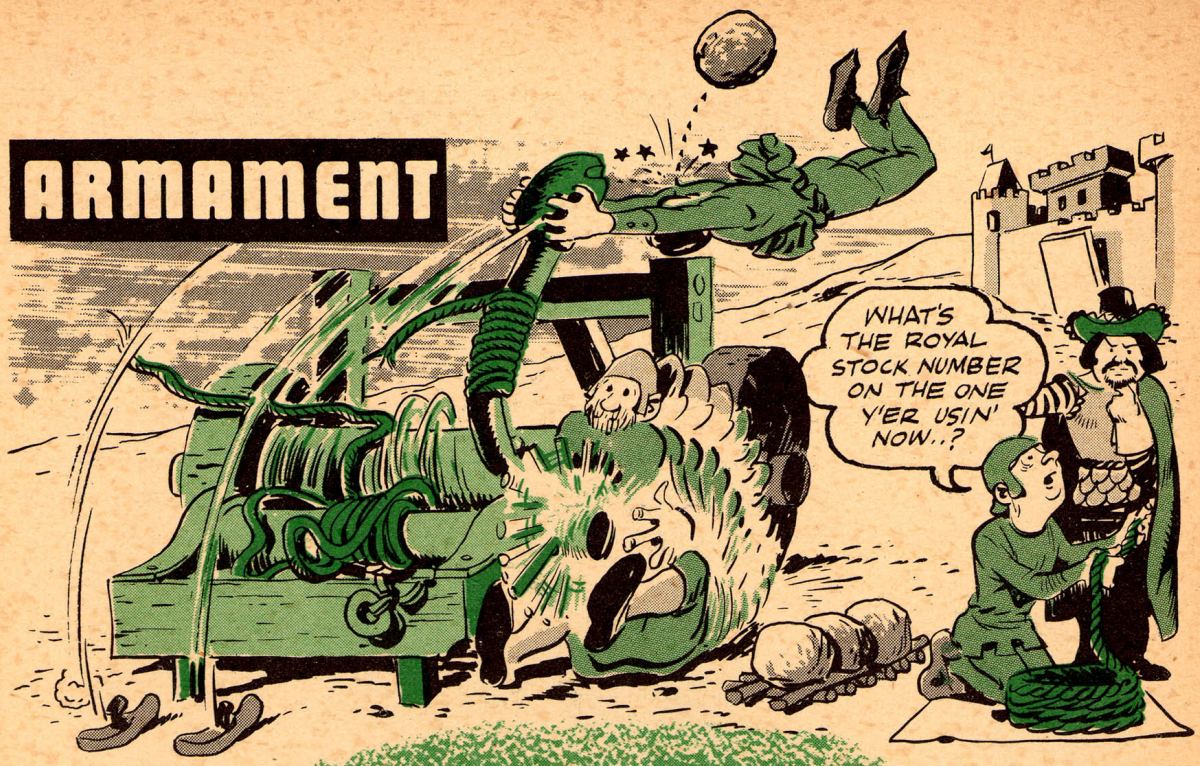


Next, take a check on those transmission vent lines, and make sure they're clear and not clogged. Be a good idea to clean 'em out once in a while, just to make sure there's nothing in there stuffing 'em up and causing a pressure build-up.



Finally, after you've done all this and lube is still showing up, you'd be helping yourself and a lot of other people if you got those UER's (DA Form 468) off. Just jot down the trouble and your ideas about it, and send it along to the Chief of Ordnance, Department of the Army, Washington 25, D. C., ATTN: ORDFM.

Half-Mast



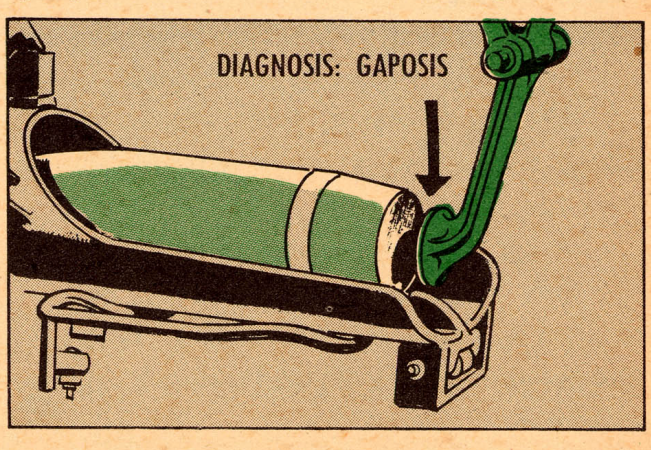
GAPE FOR A GAP

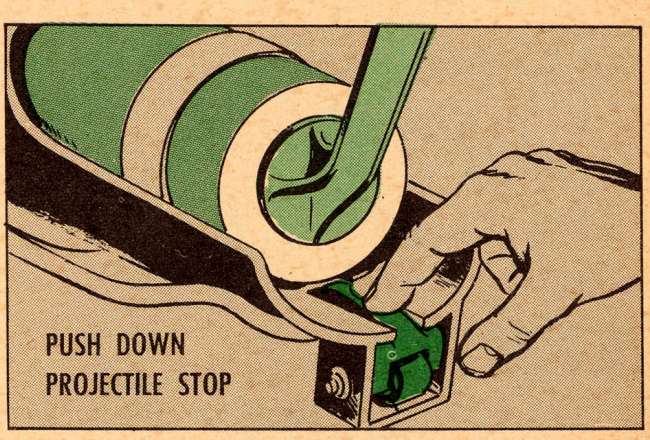
Hear tell some 155-mm M44 self-propelled howitzers have developed a case of "gaposis."

The gap is between the base of the projectile and the rammer throwing arm. It happens when the projectile stop doesn't let the ammo go far enough back to lean against the throwing arm pad.

When things are in this shape and you release the rammer mechanism, the ammo bounces forward —away from the pad. And, when the pad hits the projectile again, the ammo doesn't seat right.

Ordnance is burning the midnight oil as it looks for a fix. Meanwhile, you best check to see if you have an extra gap. If so...each time you fire, push down on the projectile stop so's the ammo will rest against the pad like it's supposed to. Use dummy ammo in your checking.





Also . . . never release the rammer mechanism without using either live or dummy ammo. Otherwise, you're liable to throw the rammer works outa kilter.

ELBOW GREASE COMES FIRST

When the Ordnance people send you a 155-mm howitzer, you wanna trot over to the exposed part of the tube. You'll have some cleaning to do.

Before the piece gets shipped to you, Ordnance coats the tube with rust preventive compound. The compound—Cosmoline—gets wiped off with a rag that has been dipped in dry cleaning solvent or volatile mineral spirits. Then once a week you smear a light coat of GAA on the tube.

In case you find there's paint or primer under the compound, tell Ordnance about it. They'll get it off and make sure no paint particles foul up the wiper and bearing surface of the recoil mechanism. So give Ordnance the word if you find paint or primer.

NO MORE SLING

You may claim there are always three ways to do things—but there are only two ways to operate the rammer-lever on the M44 155-mm self-propelled howitzer. It's either right-handed or left-handed—and it depends on you.

Operate the rammer-lever according to the arm you use to toss horseshoes and you won't wind up with your wing in a sling.

Say you're a southpaw. You stand on the left side of the howitzer, face to the rear and stand opposite the breech-ring. Then use your left hand to turn the handle bar counter-clockwise and to push toward the breech-end of the howitzer.

If you're right-handed, stand on the right side of the piece—facing the hind end of the vehicle and standing opposite the breech-ring. Then trip the release mechanism with your right hand by turning the handle bar clockwise and pulling forward—toward the muzzle end, that is.

IT'D BETTER BE THERE

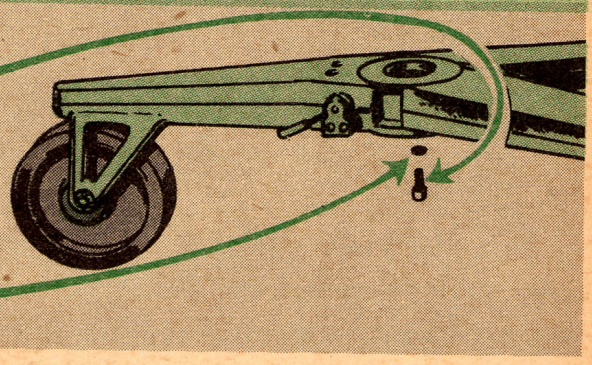
Say! Have you been elevating and traversing your 106-mm recoilless rifle with ease on your M79 mount? Want to be sure things stay that way?

Then take a look at that screw in the base assembly trunnion of the mount. Has it got a **lockwasher?** While you're at it—is the screw the right size? If it hasn't—and it isn't—one fine day you may find yourself with a jammed elevating and traversing group.

THE PARTS YOU'LL WANT TO MAKE THINGS RIGHT ARE:

Screw, cap hex-socket hd, phos-ctd, alloy-S, $^{5}/_{16}$-24UNF-3A x $^{7}/_{8}$ (FSN 5305-057-1284).

Washer, lock: int-teeth, hv, S, phos-ctd, $^{5}/_{16}$-in screw size (FSN 5310-018-0351)



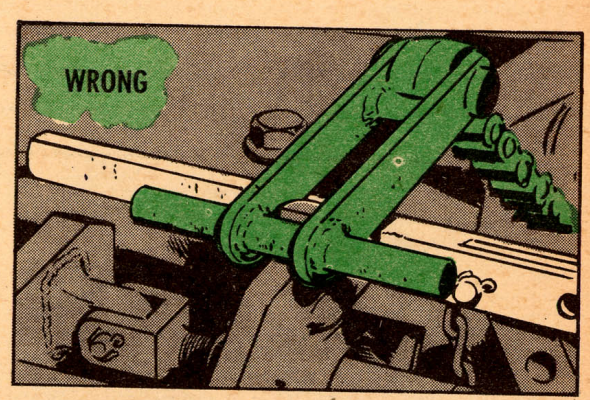
LIFT THE LEVER

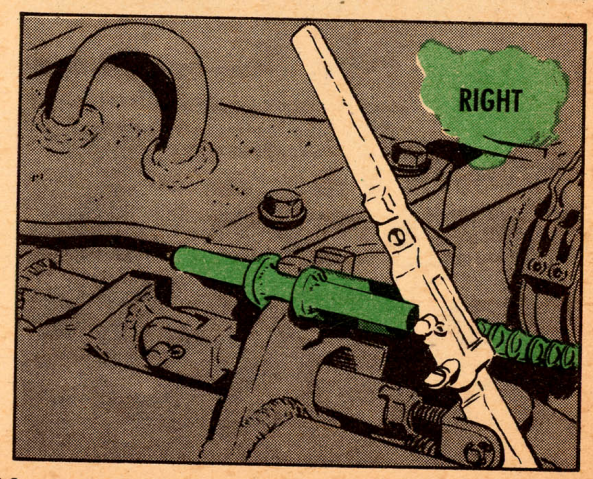
There's nothing wrong with trying to beat your own time record for emplacing the 75-mm Skysweeper. But . . . not when you bang up the emplacing hook on the front bogie in the process.

Some guys are leaving the locking lever handle in a locked position and then attaching the lifting chain to the hook—by passing the chain over the lever. So . . . when the weapon is being lifted, all the strain is on the tip of the hook.

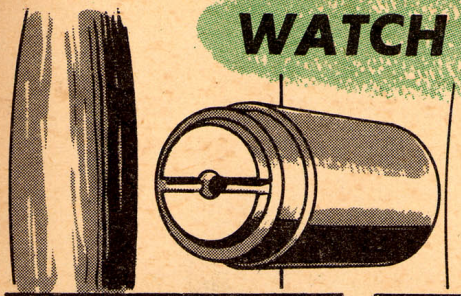
Do what TM 9-361 tells you—lift the lever and then attach the chain, and the strain will be where it should—in the middle of the hook.

To be on the safe side . . . stencil on some kind of warning next to the emplacing hook—like "Raise locking lever handle before attaching lifting chain."

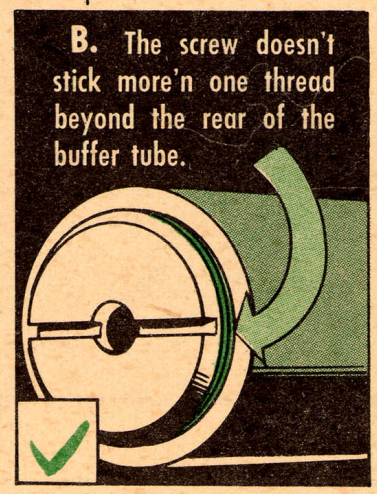


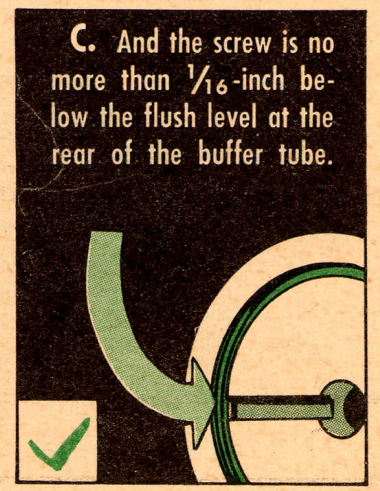


WATCH THE THREADS



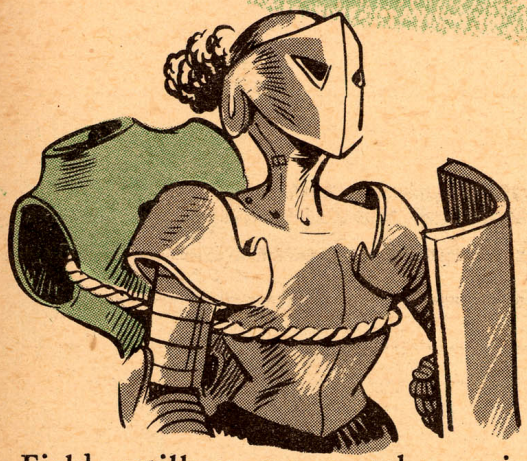
You'd do well to meander around the back plate on your .50-cal machine gun for a look at the adjustment screw. Then make an A, B, C check.





If you said "Yes" to all three checks, you're OK. If not, send the gun back to Ordnance.

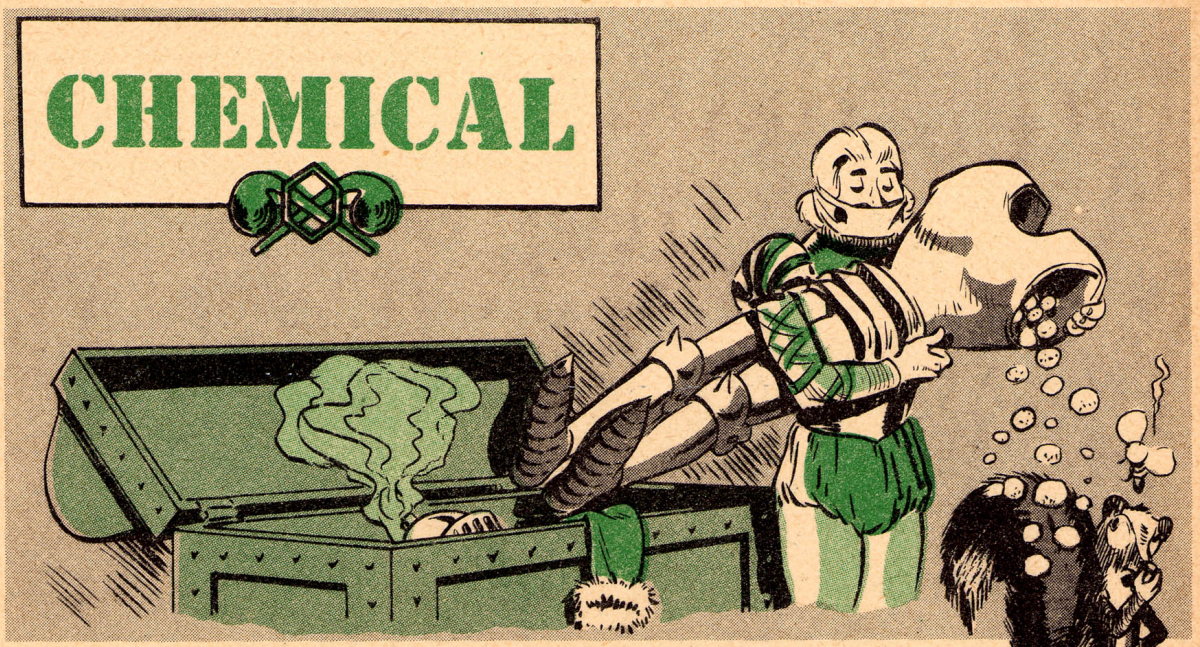
GOT YOUR SPARE?



Field artillery crews, take notice. Some batteries are authorized a spare gunner's quadrant M1A1 to keep the piece active when their quadrant is sent to Ordnance for adjustment.

You can see this in Ord 7's, so you might want to requisition a spare quadrant if you work with any weapons listed below. The SNL's are listed here for handy reference—

4.2-in M2 mortar	A70
4.2-in M30 mortar	A85
75-mm M1A1 howitzer	C20
105-mm M2A1 and M2A2 howitzers	C21
75-mm M20 and T21E12 rifle	C74
105-mm M27 and M27A1 rifle	C77
76-mm M48 gun	C84
4.5-in M21 rocket launcher	C90
155-mm M2 and M2A1 gun	D24
240-mm M1 howitzer	D31
762-mm truck-mounted rocket launcher	D65



Dry Run With Hot Water

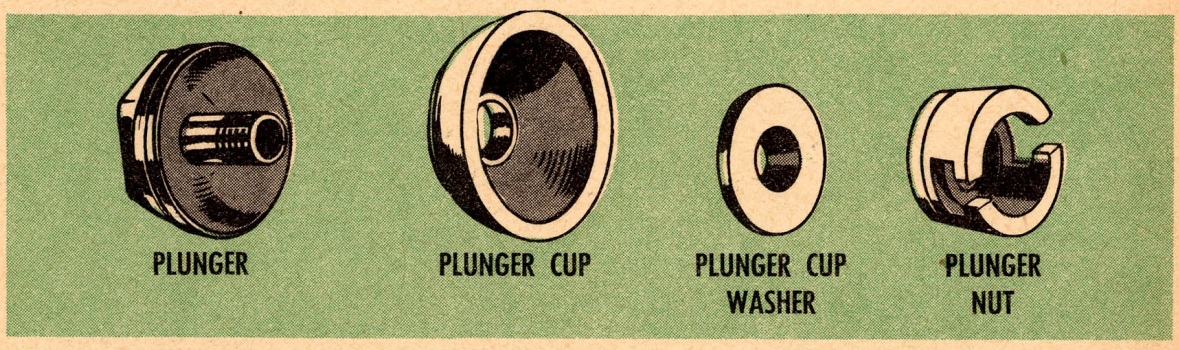
Come spring, you get out the moth balls to pack away those old OD's. But you wouldn't think of wearing the OD's in the fall without taking the moth balls out of the pockets and airing the uniform.

Maybe you've just got a decon that's been in "moth balls". It, too, requires a little special attention to get it into good shape.

No matter which decon you have — the M3A1, M3A2, M3A3 or M4 — it has to have the preservatives cleaned out if you want a spray instead of a sputter.

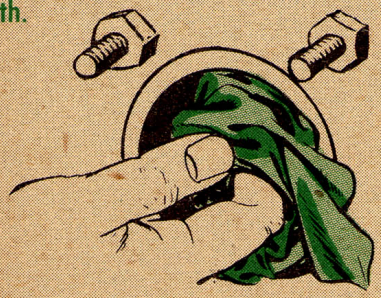
Here's a very important point to look after...

Check the processing tag (on the truck's steering wheel) for special note about the packaging of the pump's plunger cup assemblies. When these assemblies are packed separately, the note'll say so, and you'll find them in a small box fastened to the platform along side the pump's hood.

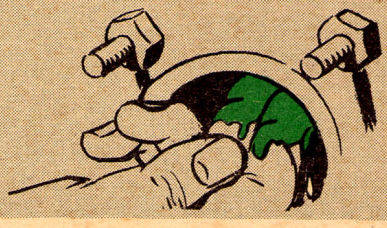


Remove the plunger assemblies from the box and clean off any preservative with dry-cleaning solvent. Now, take the cylinder heads off the pump, and . . .

Clean the cylinders with a dry-cleaning solvent, but be careful you don't scratch the porcelain walls. Wipe dry with a soft, clean cloth.

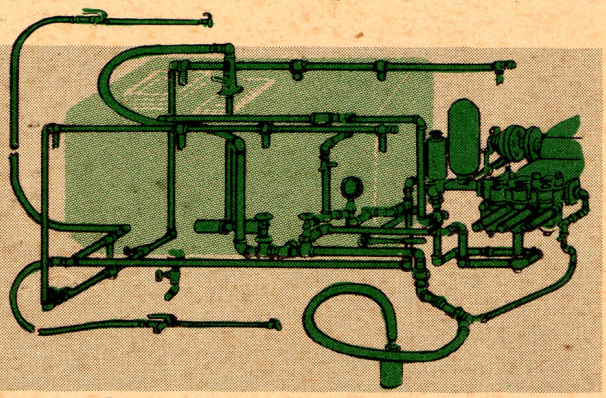


Smear the cylinder walls with a light film of grease (GAA), so the plunger cups will go into place easy-like. Then put the plungers back in and put on the cylinder heads. (Your decon's TM gives you a run-down on taking out and putting in the plunger assemblies.)



Now, the chances are there's a lot of preservative grease on the inside of the pipes that needs to be flushed out. To get at this, pull a before-operations check on the decon and get set to operate.

Fill the tank with water (make it hot water, if possible). Then pump the water out, part of it through the spray hoses and the rest of it through the auxiliary shower. This'll take care of any preservatives in the pipes and hoses.



Then you're all set to finish processing your decon like your TM says under the section called "Service Upon Receipt of Equipment." And don't forget that after-operations check, too.

Decons, swap mounts!

All truck-mounted decons (M4's, M3A1's, M3A2's) were ordered off their old World War II 2½-ton chassis sometime ago. But, the MWO giving the decons new chassis must've missed some units, since requests continue to come in for repair parts to support decons on the old chassis.

Supply's no longer stocking parts for the old decon set-up. If your decon hasn't been converted, please listen close—

Here's the only way you can keep it rolling:

MWO CML 18 (Jan 55) puts the M3A1 decon on an M45 chassis.

MWO CML 19 (Jan 55) mounts the M3A2 decon on an M45 chassis.

MWO 20 (July 54) mounts the M4 on either an M45 or an M207 chassis . . . depending on where you're located.

The chassis swap is a job for your Chemical maintenance support outfit. Better give them a buzz right away.

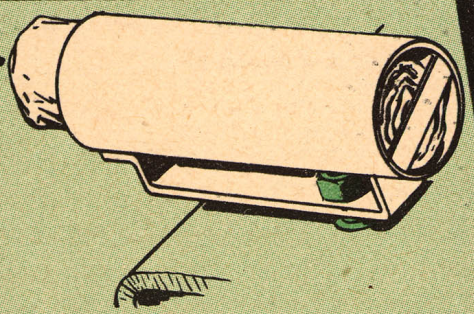
QUARTERMASTER

Forms Holder For

Some people sit on 'em. Some hold 'em in their teeth. Others carry 'em in canvas pouches strapped to their vehicles. And still others keep required forms in their pockets when operating Materials Handling Equipment—since there's no special place provided on the equipment.

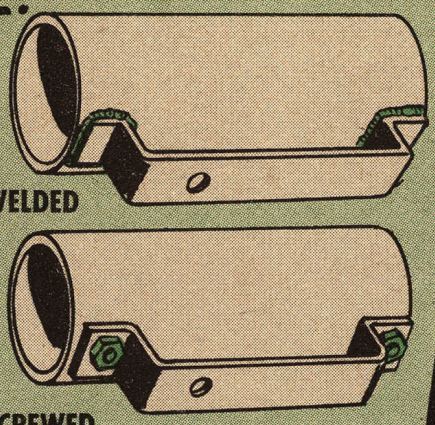
At Aberdeen Proving Ground, Md., they solved the forms-carrying problem for all their MHE with this simple fix:

1.



Short lengths of pipe (6-inches long and 2-inches in diameter) fixed up with a beer-mug type handle. A hole or two drilled in the 1¼-inch strap metal handle provides for attaching the holder to a convenient bolt or screw on the MHE.

2.

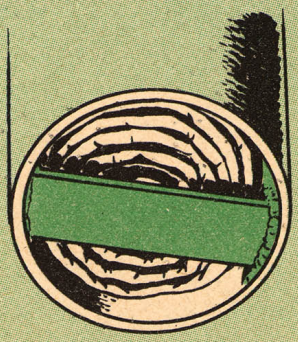


WELDED

OR SCREWED

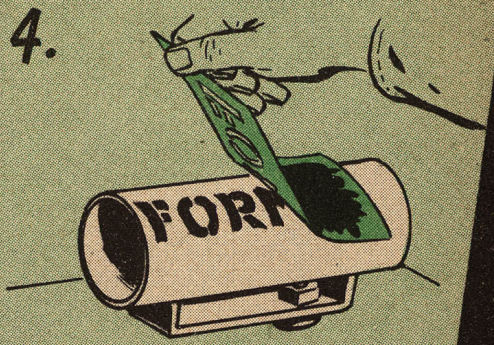
The handle can be welded or screwed onto the holder.

3.



The top of the holder is open, but a narrow strip of metal goes across its bottom to keep forms from slipping thru. The bottom strip can be welded on or screwed on.

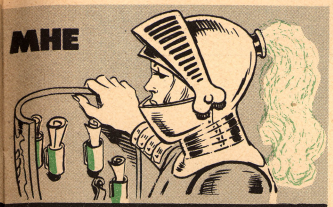
4.



The holder's painted yellow to match the MHE. And the word "Forms" is stenciled in black on one side. Each holder also gets a home-made envelope of waterproof paper.

QUARTERMASTER

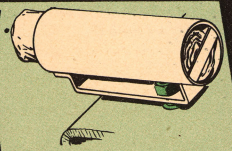
Forms Holder For MHE



Some people sit on 'em. Some hold 'em in their teeth. Others carry 'em in canvas pouches strapped to their vehicles. And still others keep required forms in their pockets when operating Materials Handling Equipment—since there's no special place provided on the equipment.

At Aberdeen Proving Ground, Md., they solved the forms-carrying problem for all their MHE with this simple fix:

1.



Short lengths of pipe (6-inches long and 2-inches in diameter) fixed up with a beer-mug type handle. A hole or two drilled in the 1¼-inch strap metal handle provides for attaching the holder to a convenient bolt or screw on the MHE.

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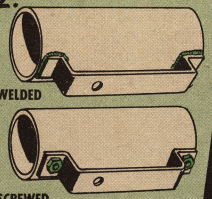

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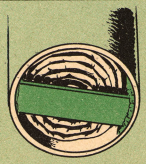

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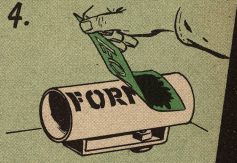


The holder's painted yellow to match the MHE. And the word "Forms" is stenciled in black on one side. Each holder also gets a home-made envelope of waterproof paper.

5.

The forms (SF 91 "Operator's Report of Motor Accident," DD 518 "Accident-Identification Card" and DD 110 "Vehicle and Equipment Operational Record") are placed inside the envelope and the whole business rolled up neatly to fit inside the holder. (NOTE: The DD110 doesn't need to go inside the envelope unless you're working outside on a wet day.)

Whether you use this or make a pouch out of canvas (depending on operating conditions or kinds of documents you carry) you'll find they come in mighty handy for keeping your papers. Be sure to get the OK of your CO first, of course.

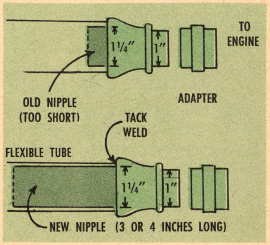
For A Stronger Tube

Dear Connie,

We had a little trouble with the flame and spark arrester muffler on our 50-GPM gas dispensers until we came up with this fix. The flexible tube kept breaking loose from the reducer because there wasn't much surface there to hold it. A real fire hazard.

So we replaced the short piece of 1¼-inch pipe with a longer section (3 to 4 inches long) and then tack-welded the tube back on. Makes for a stronger connection and safer operation.

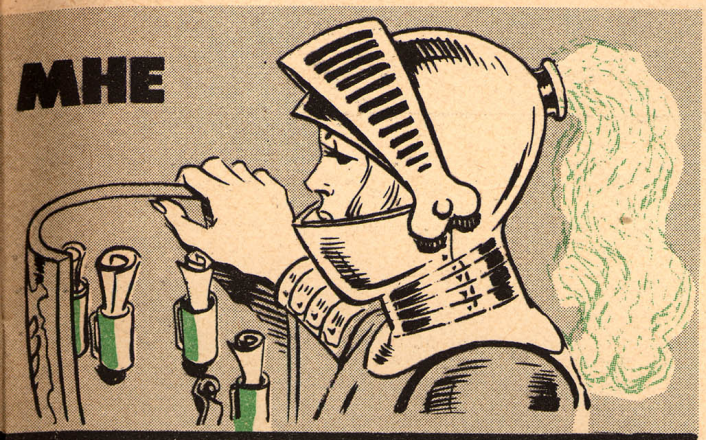
Petroleum Department
QM School, Fort Lee, Va.

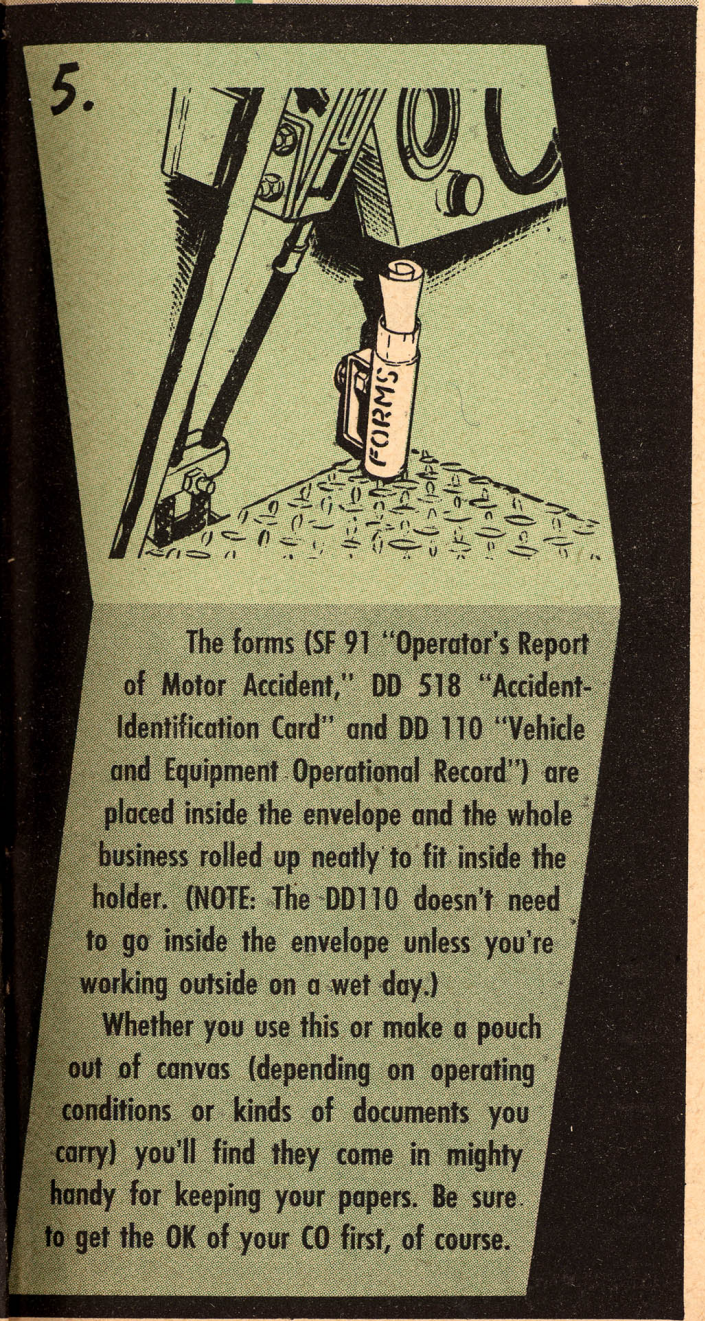


Dear Gang,

That's really cooking with that gas dispenser. But get an Unsatisfactory Equipment Report (DA Form 468) in on it right away—like you do on any deficiency you discover.

Connie





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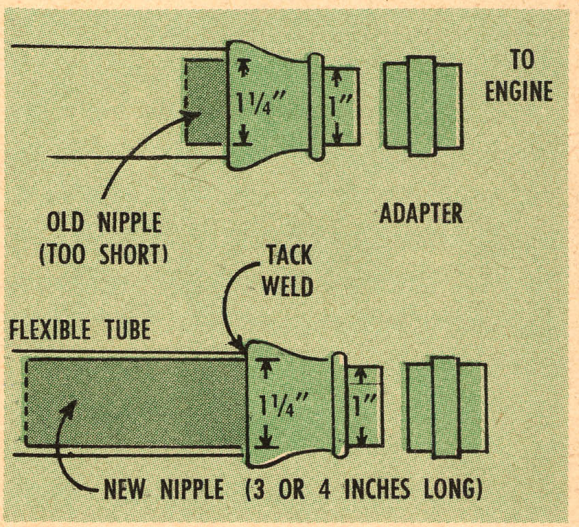

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With Good Maintenance Hand Tools Don't

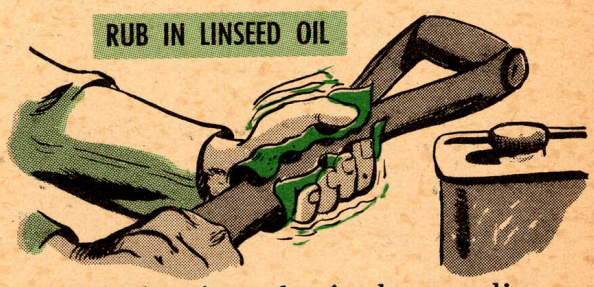
The good old Army mule has been filed away under obsolete items, along with pigeons, flintlock rifles, and leggings. An old-timer can hardly pick up a paper these days without reading where a piece of equipment he learned to use as a recruit has faded away.

But tools the old-timers used as earth moving equipment are still here and will be for a long time—meaning picks and shovels and such stuff.

When you're on the end of a long-handled shovel heaving soggy dirt out of a ditch, the shovel seems tougher than King Kong. Seems like six men and a boy couldn't deadline it or wear it out.

But hand tools—especially the wooden handles—need maintenance the same as a bulldozer or generator. Those wooden handles catch it from rot, insects, and unfair wear and tear.

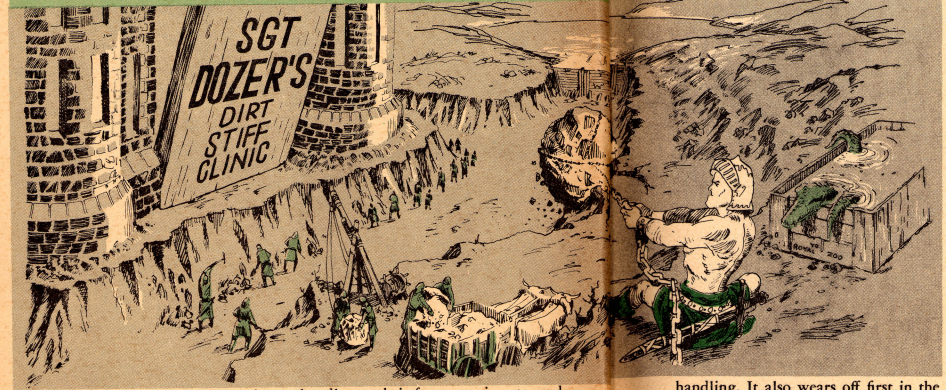
In most climates, where there's little or no danger of bugs chewing up the handles, maintenance is simple. Just use linseed oil and rub it in good, like on a rifle stock.



Painting is authorized, according to TM 5-632 (1 Feb 56), but stay away from it on tools that're used a lot. Paint makes a wooden handle bind too much. Doesn't give enough "slip" for good

With Good Maintenance

Hand Tools Don't Fade Away



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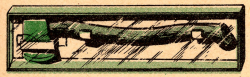
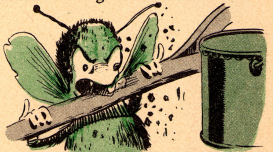
Painting is authorized, according to TM 5-632 (1 Feb 56), but stay away from it on tools that're used a lot. Paint makes a wooden handle bind too much. Doesn't give enough "slip" for good handling. It also wears off first in the spots where a tool's handled most (like on the end and middle of a long-handled shovel).

On the other hand, paint is good for stuff like fire axes and other tools that are seldom used and have to look good all the time. That also goes for tools carried full time on vehicles out in the weather.



But in most cases, a good dose of linseed oil—applied as needed—keeps the handles in good shape. It also gives you that little "slip" that makes the most of elbow grease... and gives less blisters.

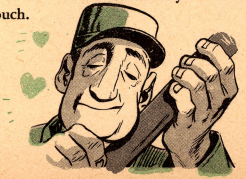
In climates where there's danger of bugs eating up the handles or bug eggs being laid in the wood, you need insect killer. A five-gallon can of the stuff's



ready made under FSN 6840-253-3892. The official name-calling is Insecticide, DDT, liquid, 5% DDT. Dunk wooden handles in it for bug protection.

If the handles are to be painted, do the dunking before the painting.

Some tools get tossed around like the instructor's assistant in a judo class. That cuts 'em, scrapes 'em, and bangs 'em up generally. Look your tools over now and then and apply linseed oil, paint, or insecticide as needed. Gives tools that sm-o-o-oth finish you love to touch.



Fade Away

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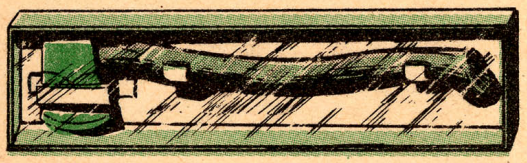

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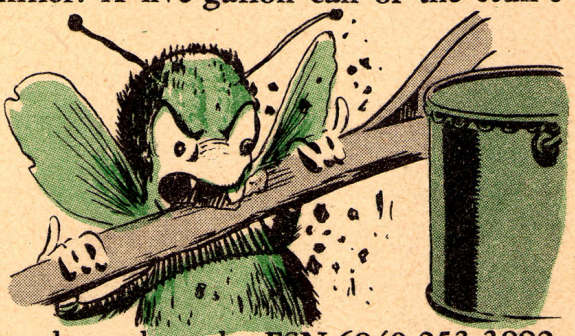

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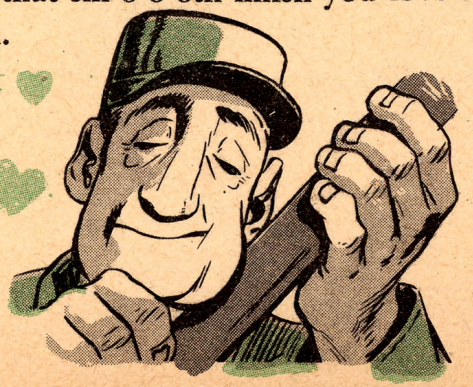
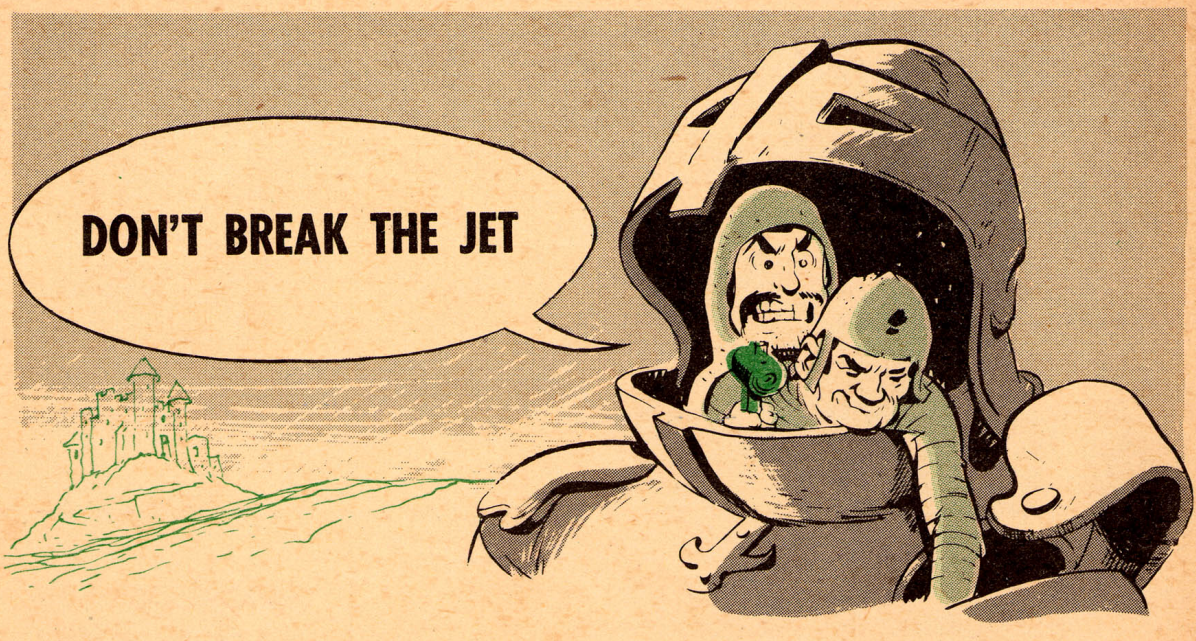


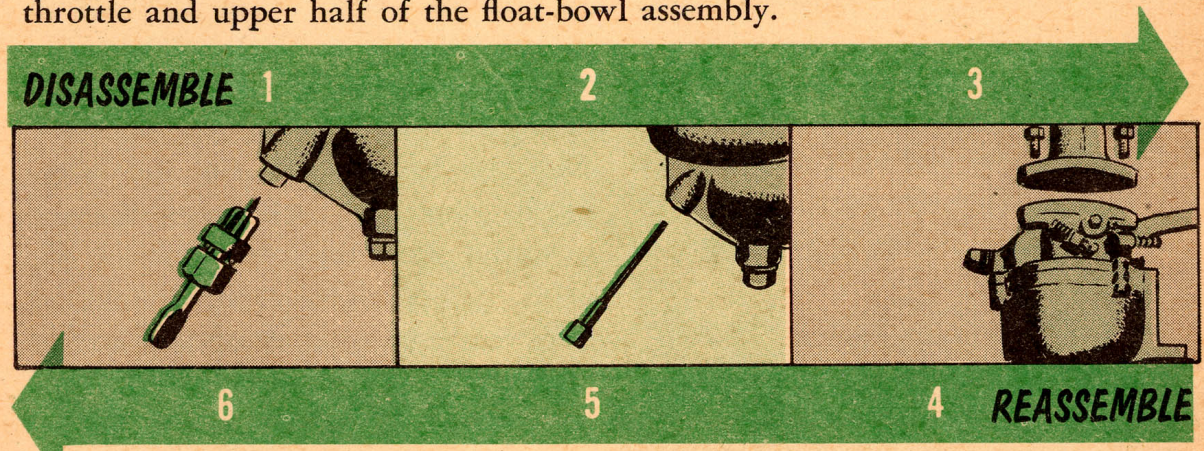


Easy does it with the main jets on Model BP Briggs and Stratton engine carburetors. One of those jets is easy to break when you're taking apart a carburetor.

The jet runs from the adjusting-needle valve right through the venturi and into the casting on the other side. When you try taking the carburetor apart without removing that jet—the jet breaks.

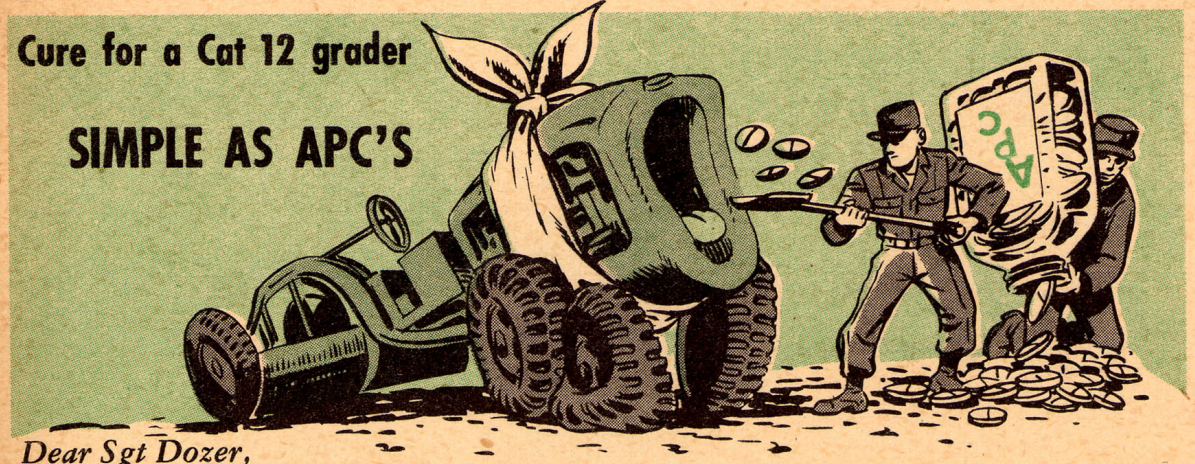
To disassemble, remove the needle-valve and take the jet out **before** taking the float-bowl off the parting surface.

Same thing with taking the float-bowl down while the carburetor is still on the engine. First, the needle-valve comes off and the jet comes out. The bottom half of the carb, with all the narrow passages, can be cleaned without removing the throttle and upper half of the float-bowl assembly.



To reassemble, put the float-bowl on the throttle assembly. Next put in the jet and then the needle-valve.

Careful when putting the needle-valve assembly on the carburetor float-bowl. Loosen the valve a couple turns before screwing the holder into the float-bowl. Prevents forcing the needle up into the jet and damaging the needle-valve and seat.



Dear Sgt Dozer,

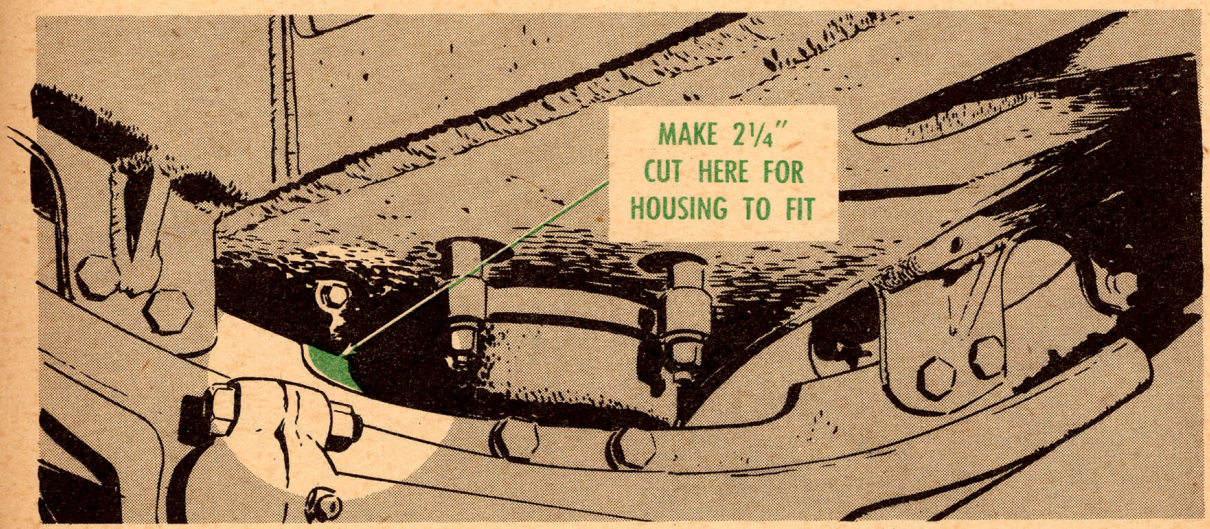
The cure for a worn center-shift rail on a Cat 12 grader isn't APC's—but it's almost that easy.

A worn-down rail means wobbling because there's too much play between the rail and the center-shift pinion. That play could make a grader chew up teeth when her blade's working on the side of a bank.

To make the rail last longer—just turn it around. That puts the smoother side of the rail next to the rack's teeth.

When you turn her, make a 2¼-inch cut on the left side of the rail's throat so the center-shift housing can fit. The rest is real easy. The frame's anchoring brackets fit the same backwards and forwards.

Post Engineers Heavy Equip. Maint. Shop
Aberdeen Proving Grounds, Md.



Dear Gang,

Nice work. Nothing like an idea that saves money and is also easy to do.

Sgt Dozer

CONTRIBUTIONS

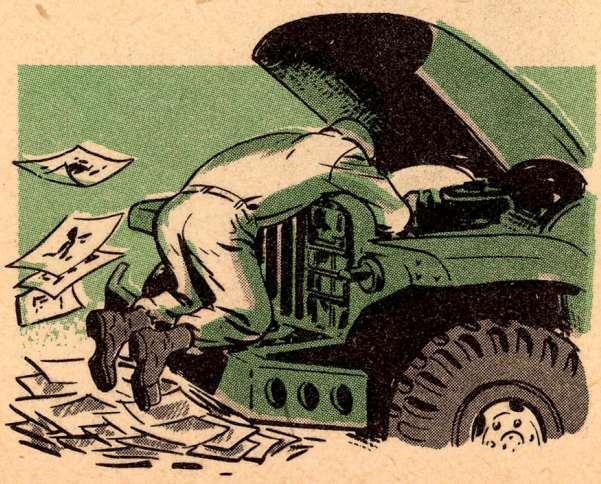
A HELPING HAND

Dear Editor,

This second echelon shop was pretty mixed up when we found our operation being hampered by the DA Form 461, "Preventive Maintenance Service and Inspection for Wheel and Half-Track Vehicles."

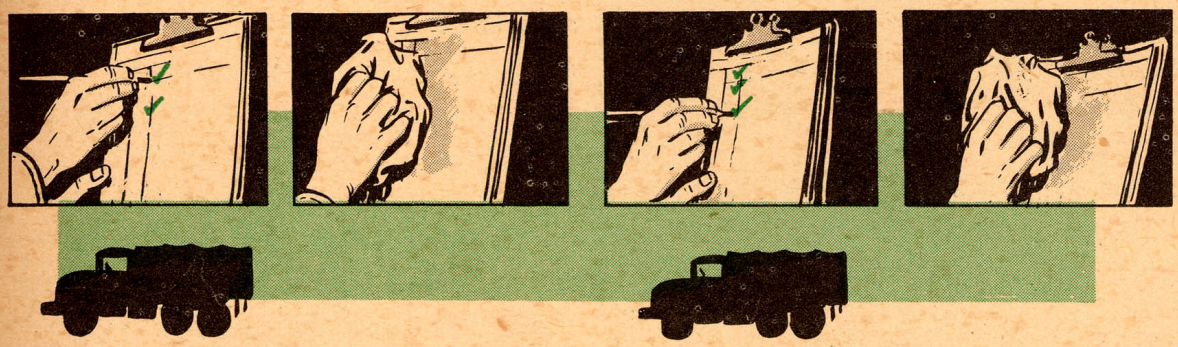
Being humans swayed by temptation in addition to being short timers in the Army, most of my men were looking for the easy way to do maintenance. Instead of using the 461 for its *only* job —recording—they were using it to do their maintenance. Not using the Organizational Mechanic or Maintenance Crew C and D Preventive Maintenance Service table given in every TM led to plenty of problems, because complete maintenance was not being done.

Chief among the many reasons why the TM maintenance table was not being used was because the type is too small to see, especially when you have your head under a hood or you're underneath a truck. Not only that, but pages blow in the breeze, so you lay a wrench or screwdriver on them... soon the pages get black from grease and you can't read them. If you want a new TM, you have to wait a month or so before you get it. So, the men just took the easy way and used a nice, clean DA Form 461, which is easily read and followed. The result was that the trucks didn't receive their proper maintenance.



We decided to do a little so-called "human engineering" to relieve a tough situation. We had the table from the TM reproduced in larger size. Then, we put the individual sheets into their own pieces of acetate, clipped the sheets together and had the complete table laid out nice, big and neat. Each mechanic was given a table for each truck plus red and blue grease pencils.

When a truck rolls in, the mechanic takes his guide and two grease pencils, *leaving his 461 on the work bench.* Right down the table he goes, without any sweat about blowing pages and eye-straining type, checking out each item from the enlarged acetate-covered TM table. If the item's OK, it's checked with the blue grease pencil. If there's a deficiency, it's noted in red pencil. Then, the mechanic goes back to his work bench and puts his findings on the 461. With a rag, he wipes the acetate clean and it's ready for the next truck.



This system has also solved another problem. Our inexperienced mechanics now find it pretty hard to overlook or miss any of the TM paragraph numbers the table calls their attention to for checking individual parts of a truck. The paragraphs referred to are now brought out big and clear. So, more and more, these men are using their TM's to make a more careful check.

The Shop Gang
Camp Hanford, Wash.

SHAVED HEADS

Dear Editor,

Ever try adjusting track tension on your M47 tank using just the OVM tools? You'll find that open end wrench (41-W-1436-25) listed for loosening the adjuster lock nut is pretty fat to squeeze into such a tight place. The reinforcements around the jaws of this hefty persuader are just too beefy to let it fully seat on the nut.

We found the only way to make it work is to trim off some of the beef. With a cutting torch we shaved the head by half an inch. This doesn't seem to weaken the wrench enough to hurt anything. And it lets us use it to get the job done.

Mr. S. C. E.

Shave here (EASY does it) until your wrench fits

(Ed Note — That M47 track adjustment's been a tough nut. Looks like you've hit upon one way to help crack it. Take care though, shave only where it's needed.)

SWITCH-ER-OOOOOO

Dear Editor,

For those guys having trouble getting a tachometer cable and housing (Ord Stock No. G744-7389881) for their 5-ton M62 wrecker, here's a tip:

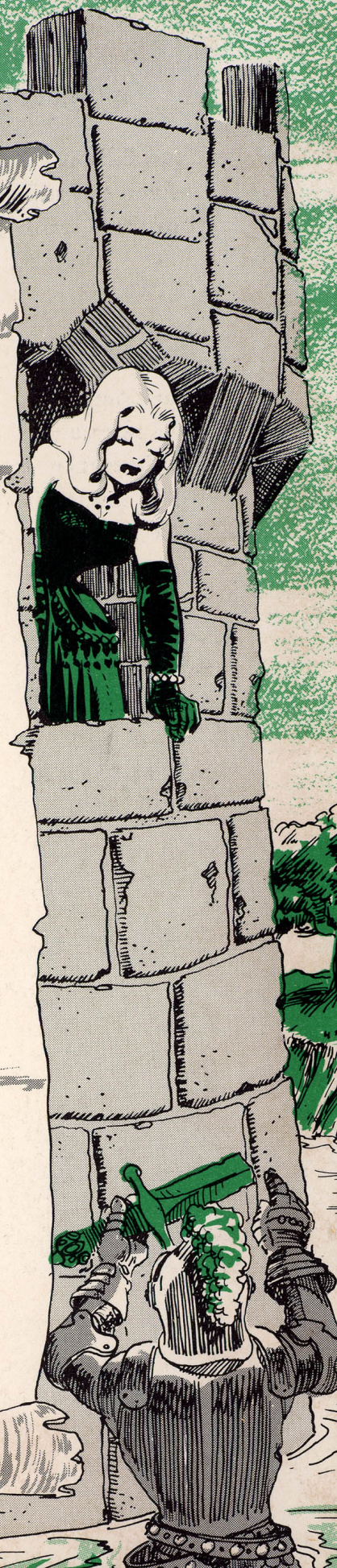
A speedometer cable assembly (Ord Stock No. G740-7527480) off an M38 Jeep will fit in place of the M62 tach cable assembly. By the same token, an M62 tach cable assembly will replace the M38 speedometer cable assembly.

Although the cable assemblies can be switched, the individual parts can't be. For example, the housing of the M38 speedometer cable won't fit together with the core of the M62 tach. The housing and core of the M62 are both about three inches longer than the Jeep's housing and core. So, whichever assembly you use, just make sure you don't separate the parts — keep 'em together.

Mr. Roger Gervais
Camp Lucas, Mich.

(Ed Note — Many thanks for a good idea. Shouldn't have much trouble getting that tach cable or, for that matter, the speedometer cable. But if you do, go ahead and play switch.)

Connie Rodd's BRIEFS



Also

Anyone looking to reinforce the door check brackets on their G741 series ¾-ton trucks take heed. MWO Ord G741-W9 (1 Mar 56) tells Ordnance to make this fix on the M37 and M43 ¾-tonners. Now, the MWO has been extended so the M42's and M201's come under it.

G749 compression

The latest on that compression business for your G749 2½-ton truck engine is that the minimum compression which you should have is 90-PSI. As far as the maximum pressure variation from high to low cylinder, you should only buy a difference of 10-PSI —no more.

See your etchings?

When the etched markings on your tank engine's oil level dip stick get hazy from wear, try using a center punch and a couple of light taps to re-impress them.

Off base

Gotcher pencil handy? So you won't be off base when it comes to ordering blackout lights for your Nike and M33 FCS vans 244, 258, and 259, best jot these numbers where they'll be handy —Bayonet base type lamp (Ord Stock No. G789-8328090), candelabra type (Ord Stock No. Y010-8019877).

Watch that shaft

You medium tankers wanna take it easy when handling and operating the T31 ballistics computer. If you run into trouble—like any one of the shafts sticking—give Ordnance the word.

Hand saver

It's a good idea to keep this thought running through your head—always wear leather gloves when handling those winch lines on your vehicle. And never let that line slide through your hands. Gives crevices in the palms.

Watch that stuff

Don't rupture your oil pan when lifting the engine out of the G744 series 5-tonners. Lifting that engine without jacking up the truck's frame could lead to a hole in that pan. Without a boost, the oil pan hits the top of the differential as the engine is coming out—and there you are.

Exercise it

Most anything'll get rusty if you don't use it. Right? Well, same's true for the hand-starter cable on your tank's auxiliary engine. About once a month you should exercise that cable—pull it out (easy-like) to its full length a time or two. This'll keep it from freezing to the reel. And it'll be ready to do the job when you need it.

your BATTERY...
the heart of your vehicle
ELECTROLYTE AT RIGHT LEVEL AND NOT OVER-FILLED?
HOW'S ME TICKER, DOC?
CAPS, BRACKETS, CABLES AND TERMINALS, TIGHT AND CLEAN?
VENTS, HOLD-DOWNS AND COVERS (UNDERSIDE) CLEAN?
SPECIFIC GRAVITY, ABOVE 1.225° (AT 80°F)?